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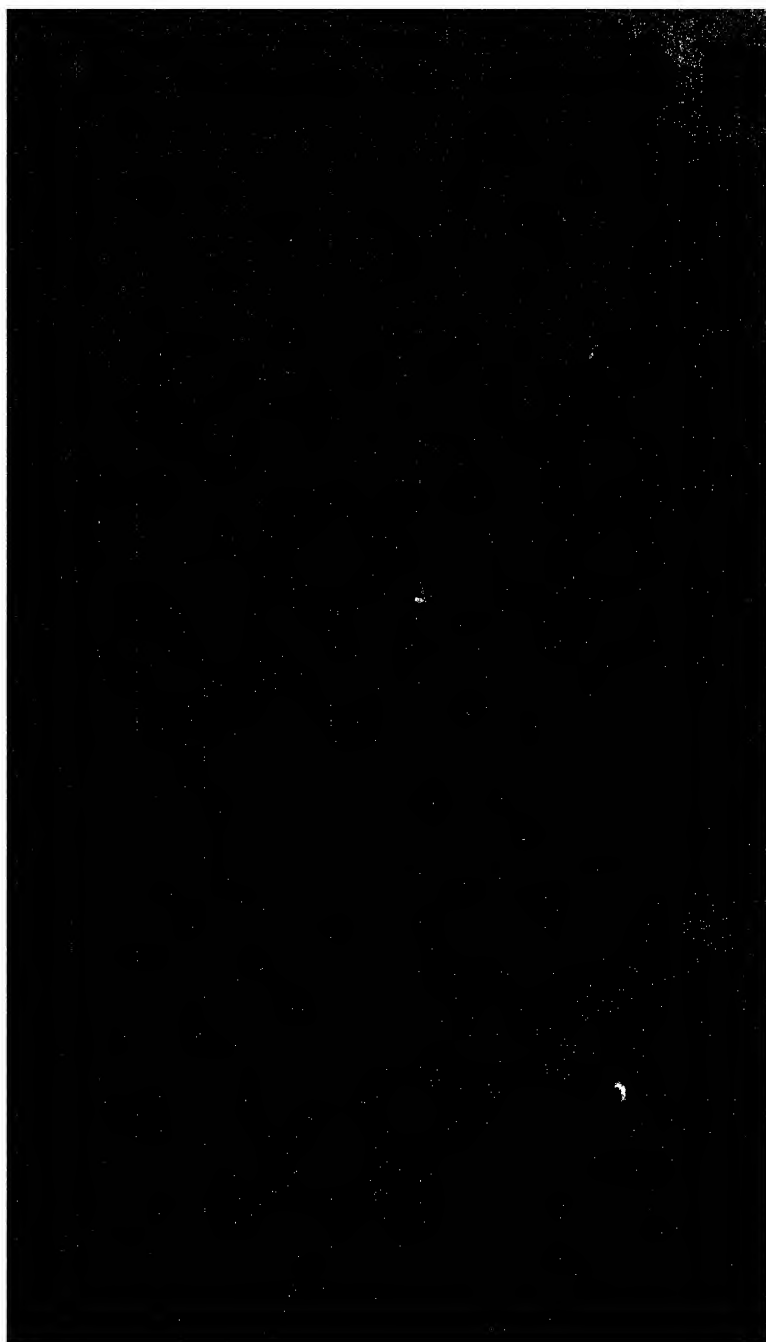
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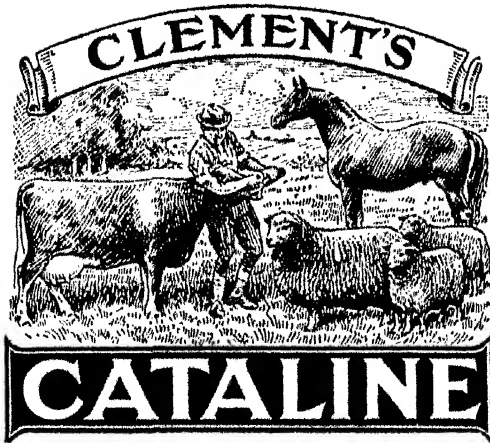
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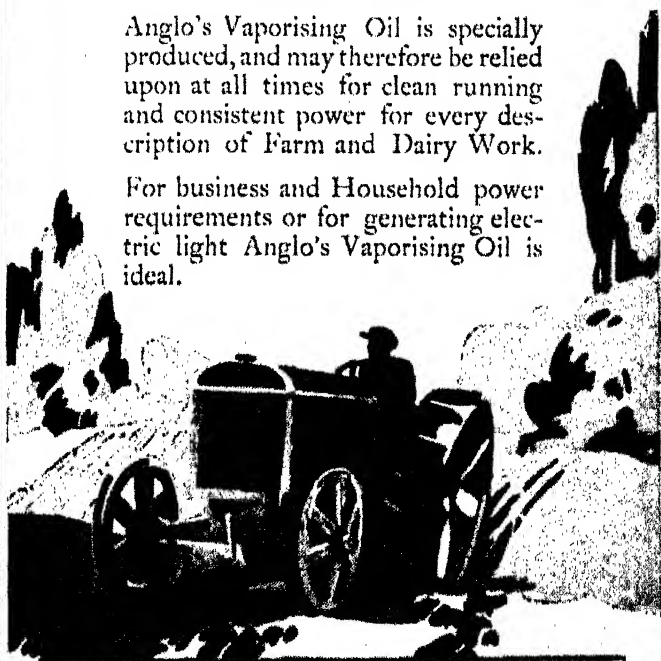
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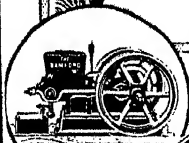
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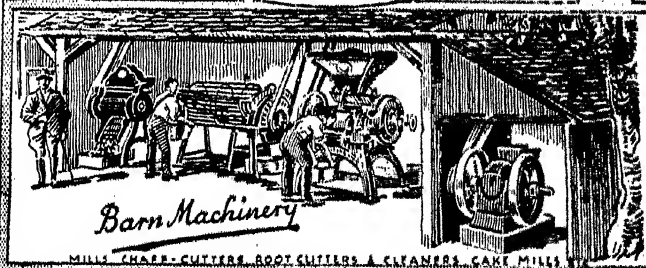
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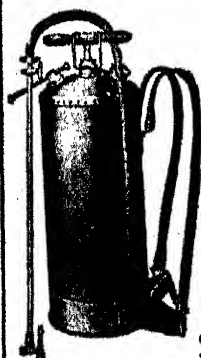
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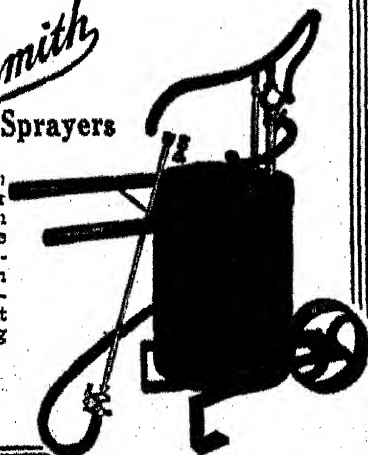
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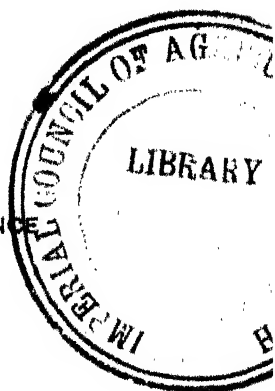
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				" 82.	1921.	Issued as an Annual Volume in paper covers.	
				" 83.	1922.	Issued as an Annual Volume in paper covers.	
				" 84.	1923.	Issued as an Annual Volume in paper covers.	
				" 85.	1924.	Issued as an Annual Volume in paper covers.	
				" 86.	1925.	Issued as an Annual Volume in paper covers.	
				" 87.	1926.	Issued as an Annual Volume in paper covers.	
				" 88.	1927.	Issued as an Annual Volume in paper covers.	
				" 89.	1928.	Issued as an Annual Volume in paper covers.	

(The numerals within brackets indicate the numbers as printed on the several Parts of each Series.)

JOURNAL

OF THE

ROYAL AGRICULTURAL SOCIETY OF ENGLAND

SUGAR BEET: POSITION AND OUTLOOK.

It is universally agreed that it would benefit the Nation in general and Agriculture in particular if a Beet Sugar Industry could be permanently established in this country on a sound and paying basis. We already import too much of our food and have too many unemployed. If we can produce a good proportion of the sugar we consume, and reduce the numbers on the dole, the nation gains at both ends. It is on that ground that Parliament has allocated large sums out of national revenue to set this Industry going, in the hope that it will afterwards be sufficiently established to be self-supporting.

It is the object of this article to set out the factors bearing on this great national experiment, to discuss its chances of success and to suggest any means that are still open to us to avert failure.

These factors are :—

- I. The State's contribution.
- II. The yield and quality of the crop.
- III. Growers' costs.
- IV. Factory costs.
- V. The price of sugar.
- VI. Taxation.

It is upon the interaction and wise manipulation of these factors that success or failure will depend.

I. *The State's contribution.*—This takes the form of a subsidy nominally spread over the ten years from 1924 to 1933 inclusive ; but the factories could not be erected in time to earn any subsidy for 1924, so that, in effect, the subsidy is for the nine years 1925-1933 inclusive. It is paid to the factory owners, and,

without going into detail, it is sufficient to say that it is graduated as follows :—

For the first three years, 1925-7, 19s. 6d. per cwt. of sugar produced.

1928-30, 13s. per cwt. of sugar produced, and 1931-33, 6s. 6d. per cwt. of sugar produced.

This works out at about 57s. per ton of washed beet of 17 per cent. sugar content for the first period, with corresponding reductions in the subsequent stages of the subsidy.

It may be noted here that the subsidy has, so far, brought into being 17 factories which, in 1927, dealt with a total acreage of 233,000, but, in 1928, the first year of the second period, the acreage grown fell to 179,000 acres.

II. *The yield and quality of the crop.*—The average yield and sugar content obtained, as shown in the figures published by the Ministry of Agriculture, are :—

7.67 tons per acre in 1925	.	.	.	.	16.36 sugar.
8.63 „ „ „ „ 1926	.	.	.	.	17.31 „
6.45 „ „ „ „ 1927	.	.	.	.	16.12 „

The 1928 yield will probably exceed 8 tons or even 9.

This average figure covers large variations in yield and sugar content due to local conditions of soil, climate and management. The four years' experience we have had is insufficient to enable us to speak positively about all the niceties of cultivation, but we began with a good deal of valuable information from the Continent, where this industry has been thoroughly established for many years, and also many of the best brains in agriculture have been applied to the economics of sugar-beet cultivation, as is only natural under present circumstances when other crops are so sadly unprofitable.

It is generally agreed that the best crops can be grown on a deep soil which must not be deficient in lime. Very heavy soils are not suitable as the cost is higher and the sugar content tends to be lower than on lighter soils ; but very poor light land, particularly when deficient in lime, cannot be relied on for a satisfactory yield.

The seed should be sown in late April or early May ; the distance between the rows should be from 18 in. to 22 in. ; early chopping out and singling are of vital importance, also keeping the growing crop free of weeds ; a good dressing of farm-yard manure, or sheep-folding is essential ; artificial manure can usually, but not always, be applied with advantage (by this I mean that the increased yield should more than pay for its cost and application) ; and the selection and use of artificials must depend upon each grower's knowledge of his local conditions of soil and climate.

The effect of seasons in different areas varies remarkably even where the character of their soils appears to be much alike. In 1927—a very wet summer—the Kelham Farm, described as light land, yielded an average crop of over 9½ tons per acre, whilst large areas of light land in East Suffolk only yielded from 4 to 6 tons. This latter type of light land goes what is called “sad” or “dead” in a cold wet summer. The foliage of roots of all kinds turns yellow and growth practically ceases, a condition from which the crop never recovers. On the other hand, in a drought year, the crop will wilt and growth will be retarded, but if showers come before the plant is actually withered recovery takes place and growth is then marvellously rapid. This and other instances show that practical local experience is the only safe guide to any farmer in deciding whether or where he will grow a crop of sugar beet.

As to cleaning. If the rows are 22 in. apart horse-hoeing is possible, otherwise hand labour must be employed. Each grower must decide as to this according to his circumstances.

Lifting should take place as soon as the crop is ripe when the sugar content is at its maximum, usually from mid-October to mid-November. The factories cannot always take delivery to exactly suit every grower, but dates satisfactory to both can usually be arranged.

Lifting is more costly on strong land and more dirt adheres to the roots. There is no standard type of lifter in general use. We find here in practice that the ordinary T.C.P. plough, with wing of share broken off, is better than most lifters.

Haulage to the factory is sometimes a costly matter, but is obviously dependent on distance and the means of transport available to each grower.

Quality of seed is important, and this is still subject to experiment. We are dependent on imported seed and it is usually supplied by the factories. It would take up too much space to discuss the seed question here, but every grower should be careful to select seed most suitable to his soil and climate. “Bolting,” *i.e.*, running to seed, is sometimes a weak point in seed otherwise satisfactory, but it is easy to overestimate the loss due to this cause as bolters make a show quite out of proportion to their numbers.

The most difficult and contentious matters attending delivery of the crop are the assessment of its loss of weight by washing and by the removal of surplus crowns, and the ascertainment of its sugar content. Both these operations are carried out on samples only and cannot be applied to the whole delivery. A sample is taken from every load delivered, and, although any individual sample may differ considerably from the true average of a load, these differences cancel each other out and the general

result is pretty near the mark. A Growers' representative appointed by the N.F.U. is entitled to watch these operations on their behalf.

III. *Growers' costs.*—Some valuable statistics have been published by the Department of Agriculture of the University of Cambridge and by the Agricultural Economics Research Institute of Oxford University. The Cambridge figures relate to the Eastern and North-eastern counties only. The Oxford figures are more general. Both reports are interesting and comprehensive and will well repay examination and study, but there is not space here to quote them at length.

The Cambridge figures show that the average over-all cost of growing an acre of sugar beet, of the 1927 crop, in the area dealt with in their report, was £21 1s. 4½d. The cash receipt was £21 6s. 9½d. Average cash profit 5s. 5½d. Credit for residual value £3 18s. 7½d. Average nett profit £4 4s. 1d. These figures are not encouraging, especially as the residual value may or may not be realised, and the subsidy was still at its maximum ; but 1927 was a very unfavourable season for this crop and a good deal of it was grown on unsuitable land. In a normal year and on suitable land a considerably larger yield may be expected. Still these results tend to confirm the view that sugar beet cannot be grown as an independent unsubsidised crop with any certainty of profit at a price below 50s. a ton for 17½ per cent. sugar.

The Oxford figures are more encouraging. They cover the four seasons from 1924 to 1927 inclusive, and the data were collected from all parts of England and from soils of different character. The general average over the four seasons works out as follows :—Yield, 9.23 tons with 17.5 per cent. sugar content. Average profit, £5 16s. 6d. per acre, of which £2 13s. 9d. was residual value, and £3 2s. 9d. cash profit.

The over-all costs, including transport, correspond pretty closely with the Cambridge figures and show that it has cost, on an average, rather over £20 to grow an acre of sugar beet. The main item of cost is labour and there are difficulties in the supply as well as in the cost of labour.

There are two ways in which sugar beet may be grown. I will call one of these growing "in shift," the other growing "out of shift." By growing "in shift" I mean growing sugar beet as part of the ordinary root crop, usually in place of mangolds. By this means a cash return can be realised and the dried pulp is returned to the grower and is a valuable feeding stuff. The labour required, or most of it, is, on this system, available on the farm, although the vital moment for chopping out and singling may coincide with the hay harvest in catchy weather to the confusion of the farmer. The trouble is that the

small acreage which can thus be grown "in shift" limits the return obtainable, and, unless sugar-beet growing "in shift" is almost universal in the district served by a factory, the deliveries will be insufficient for its requirements.

Growing "out of shift" means growing any acreage desired independently of other crops, and relying on outside labour for chopping out and singling in May and June, and for lifting in autumn. This method is only possible where organised squads of outside labour are obtainable; such labour costs 10s. per man per day including transport. Also the gangs cannot be everywhere at once and growers can only get them in rotation, so that, on some of the fields, chopping out and singling get delayed, which seriously diminishes the yield.

I have had experience of both methods and have come to the conclusion that, except perhaps in exceptional circumstances, such as the Kelham Factory estate, growing out of shift cannot be profitable at any price likely to be obtainable without a subsidy, so that, for continuance, we must rather rely on many small growers in shift than on large areas grown out of shift. Here again I must guard myself by saying that conditions vary so much that generalisations of this kind do not apply to every farm, and it is up to each grower to take stock of his own actual possibilities, and, after taking all factors into account, to decide what acreage he can deal with.

Costs other than labour vary considerably according to the nature of the soil. The heavier the land the more costly it becomes to lift the crop, and transport costs are increased as distance from the factory increases; but a scheme is now in preparation to limit transport costs for the longer distances to 8s. a ton. The cost of manuring is a variable item which each grower must decide for himself.

IV. *Factory costs.*—Figures published by the Ministry show that—

In 1924	3	factories	had been erected	at a cost of	£1,016,854.
In 1925	7	"	were	" " " "	£3,001,140.
In 1926	4	"	"	" " " "	£1,542,057.
In 1927	3	"	"	" " " "	£2,186,539.

In all, 17 factories at a cost of £7,746,590. During these four years 17.5 per cent. of this capital, viz. £1,350,936, has been paid off or written down out of profits; but as some of the factories have been so recently erected it is difficult to draw any definite conclusion from these figures.

Cantley, the oldest factory, with a capital of £500,000, had in March, 1928, an income-tax reserve of £58,000, reserves of £406,833, had £100,000 to credit of profit and loss account, had allocated £85,404 to depreciation fund, and had £248,453 invested in other companies.

Kelham, Ely and Ipswich all show large reserves, but the figures given do not make it possible to ascertain exactly what profit has been made,

It is, however, quite clear that the total sum received by the factories from the subsidy has each year, up to and including 1927, exceeded their total payments to the growers, so that, in those years, they got the beet for nothing. As against this, however, they have paid an Excise duty of 9s. 9d. per cwt., which, in 1927, amounted to £1,314,784, £4,214,100 being the amount received in that year as subsidy on sugar and molasses, and £4,147,000 was paid to growers.

The 1928 season has been a better one for growers than for the factory owners. The weather was favourable for the crop and the yield will probably be higher than in any previous year. The sugar content should also be high, as there was much sunshine, and good weather for lifting. There has, on the other hand, been a serious fall in the price of sugar, which was £28 per ton in 1927 and is now only £23. This fall is entirely borne by the factory owner.

All the factories, except the one at Eynsham, which will be referred to later, are laid out on similar lines. Those at Ely, Cantley, Kelham, Ipswich and King's Lynn belong to the Syndicate known as the "Dutch" group, which commands a long Continental experience and has probably little to learn about factory economics. The system is expensive, as the entire crop has to be milled during the lifting period of about three months, which means dealing with from 1,000 to 2,000 tons of beet daily. For the rest of the year the factory is idle.

If extraction could continue throughout the year the capital outlay on extraction plant would be reduced by 50 to 75 per cent. and permanent instead of seasonal labour could be employed. These advantages are claimed for the system now on trial at Eynsham.

The beet slices or cossettes are there subjected to a drying process and can then be stored without deterioration or loss of sugar content, thus enabling extraction to proceed continuously. Other advantages are claimed for this method, such as better quality of molasses, simpler and cheaper processes for extraction and dried pulp with higher feeding qualities.

These matters are too technical for me to discuss, but, after a visit to Eynsham and in the light of the information kindly and freely given me by the management there, I have come to the conclusion that the system is still on its trial and that it is too early to pronounce any opinion on its economic advantage over the older methods. Although extraction is cheapened and simplified, the drying process is additional. It is proposed to set up separate drying stations each dealing with about 25,000

tons of sugar beet, which is the quantity now being dealt with at the factory with its single drying plant.

The four drying stations required to deal with 100,000 tons of beet would involve a capital outlay of £180,000. Each drying station would have to be worked during the lifting period only, as in the other factories. The saving in time and capital applies to the extraction process. The extraction plant for dealing with 100,000 tons of beet, after drying, costs £50,000, which, added to the £180,000 for the four drying stations, means a capital outlay of £230,000 as against £400,000 for the Ipswich factory. There is also saving in transport, as the cossettes lose 75 per cent. of their weight in drying. So far neither the time the Eynsham factory has been at work nor the scale of its operations has been adequate to supply a decisive test of the merits of the system.

During the process of milling there is a loss of about 3 per cent. of sugar. Thus, in 1928, when the sugar content for which the farmer is paid will average about 18 per cent., the actual production of sugar will be 15 per cent. At Eynsham this loss is stated to be only 2½ per cent. No detailed particulars are available showing what the manufacturing costs are; these can only be roughly deduced from the published figures quoted above.

The last two factors, viz., (V) *The Price of Sugar* and (VI) *Taxation*, require little explanation, but they have an important bearing on the future of the Industry.

As already stated, the world price of sugar has recently fallen considerably, and Home production of sugar is subject to the same world-wide competition as in the case of other farm crops.

There is an Import duty at the rate of 11s. 8d. per cwt. on foreign sugar, and, up to 1928, 7s. 4d. on Dominion and Home sugar. This preference of 4s. 4d. was increased to 6s. by the 1928 Finance Act.

I have now described the birth and babyhood of this "sweet" infant. The question is: Will he come to maturity, and take his place as one of our productive industries, or will he fall into a decline and die when his period of artificial feeding comes to an end? This mainly depends on how far it is found possible to reduce both growers' and factory costs.

Growers' costs have, so far, exceeded £20 an acre, but by growing in shift and only on suitable land—and by taking advantage of the experience gained in cultivation, this figure can be reduced, though perhaps not very materially. If, however, by the same means, the average yield can be increased by even one ton per acre it will considerably affect the price at which it will be possible to grow the required acreage.

The price paid to the growers in 1926 and 1927 was 54s. per

ton of beet with $15\frac{1}{2}$ per cent. sugar content, with a bonus of 2s. 6d. for every additional 1 per cent. of sugar.

The price agreed between the National Farmers' Union and the factory owners for the present three-year period, 1928-30, is 46s. for $15\frac{1}{2}$ per cent. sugar, with 3s. bonus for the first additional 1 per cent. and 3s. 4d. for every further 1 per cent. This means that, for $17\frac{1}{2}$ per cent. sugar, the price in 1925-7 was 59s. and in 1928-30 is 52s. 4d.

As I have said above, I think it will be difficult for any factory to get its future supplies at a price below 50s. for $17\frac{1}{2}$ per cent. sugar.

When we come to the possibilities of factory costs, there seems to be more room for reduction.

Owing to the short period of the subsidy, and to the possibility of a correspondingly short life, the factory owners have endeavoured to build up reserves out of profits which will enable them to write off most of their capital outlay at the end of the subsidy period. Where this has been done and the factory stands at a very low figure, it should be possible for it to be worked on a much lower gross profit either by the present owners or by others who might acquire it at the reduced figure, and these might include growers, if the terms of acquisition were favourable.

In Germany there are factories wholly or partly owned by growers, and, where these can obtain a share of the profits of manufacture, it pays them better to grow the beet.

Then there are the possibilities of the Eynsham system of drying the cossettes before extraction of the sugar content. If the advantages claimed for this process can be realised in practice, it should go far to cheapen manufacture and so justify a price profitable to growers. It is a pity this experiment could not have been started earlier as, if it had been proved successful, some, at any rate, of the more recently erected factories could have been built on the Eynsham model. It would be a serious matter to have to find the fresh capital necessary to adapt them after the expiry of the subsidy.

This question of the future of the industry was discussed at a meeting of the Farmers' Club in April, 1928, when an able paper was read by Mr. S. Colyer, of the Kelham Sugar Beet Estate and Factory. I then suggested that a conference should be held between the three parties concerned, viz., the State, the growers, and the factory owners, so that, before the subsidy runs out, it may be considered whether it could not be readjusted and spread over a longer period so as to reduce the necessity for such large factory reserves and so leave more money available for the growers; but I have since come to the conclusion that it is too late to make such a change. The contracts for the second

period of the subsidy are now made and cannot be altered, and all we can do is to make the best use of the next two years so that when the drop comes we may be prepared to meet it. We owe it to the Nation to do our utmost to justify the expenditure incurred, and both farmers and factory owners recognise this.

Subject to any considerable changes, either in the price of sugar or in the sugar duty, the issue mainly depends on how far factory costs (including gross profits) can be reduced. I naturally speak with less knowledge of this side of the business than I have of the growers' side, but I have formed the impression that it should be possible to extract the sugar at a cost which will justify the payment of something not far short of the present price to the grower. Time alone can prove whether this impression is correct. One thing is clear, viz. that it is useless for farmers to grow sugar beet unless there are factories able to mill it at a profit; it is equally useless to erect factories unless the owners can pay a price for sugar beet which will induce farmers to grow it. Therefore each section is dependent on the economic success of the other. The N.F.U ably represent the growers, and the Beet Sugar Factories Committee the factory owners. The more these two representative bodies get together and the better they understand each other's difficulties and possibilities the better the hope of establishing the industry and the better they will be placed for negotiating with the Government of the day, should that ever become necessary.

Finally, it must be borne in mind that sugar, in common with every other Home product whether Agricultural or Industrial, is being produced under an economic system which puts a premium on Imports and penalises Home production. Any modification here would affect this industry equally with others, and there would be no further necessity for subsidies.

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FORESTRY AND LABOUR.

THERE are many reasons why the country should adopt a forward forest policy:—

- (1) The future requirements of timber in industrial concerns.
- (2) The better and more economic utilisation of non-productive, or partially productive, land.
- (3) The climatic effect of woodlands.
- (4) Alternative employment in those districts affected by conversion of arable land to grass and the consequent displacement of labour.

- (5) The necessity of utilising many of the present unemployed in productive work.

The whole of these reasons are worthy of consideration, but this article is intended to deal mainly with the question of labour.

The total number of men estimated to be employed in, or in connection with, the production of trees amounts to about 15,000 to 20,000. Of these, some 3,500 are employed by the State.

These numbers may be insignificant when viewed in comparison with the population or the number of unemployed in the country, but they should be considered rather in relation to rural unemployment and the advantage of keeping men and their families in country districts.

The class of land generally acquired for forestry purposes would not, in any case, employ a large number of men, but the forest policy has already had some effect in increasing the number. The following cases are instances of what has been done in this respect:—

	Area plant- able	As at Acquisition				As at 30th September, 1928			
		Number of Employees			Annual Wages Bill	Number of Employees			Annual Wages Bill
		With Houses	With- out Houses	Total		With Houses	With- out Houses	Total	
	Acres				£				£
Glenmhor .	10,908	8	2	10	710	31	34	115	11,500
Tentsmuir .	3,101	5	5	10	750	16	2	18	1,800
Clipstone .	3,080	0	0	0	0	22	36	58	7,930*
Santon- Downham	4,860	3	3	6	?	45	18	63	8,079*

* At the given date the number of employees was below the average, but the amount of the wages bill is the actual sum paid during the year.

The employment possibilities of the future in the State Forests cannot be measured by that which they now provide. These forests are only in the initial or planting stage. It is not until they reach the productive stage that a full complement of labour can be employed. This must be a gradual process.

At present, with the exception of the Crown Woods, there is very little woodland managed by the Forestry Commission exceeding nine years old. At the age of three or four years these plantations have become "established," i.e., they have been beaten up to fill any blanks and the earlier weed growth has been suppressed. For a short time little further work is needed

upon them and the annual planting programme, which now averages 20,000 to 25,000 acres a year, does not materially increase the number of men to whom employment can be given.

In the earlier planted woods, the time for further attention is approaching; thinning and weeding out suppressed plants are the next operations, beginning with the more rapidly growing and light-demanding species, according to their varying demands for light and space. These thinnings are more in the nature of weedings and are of little value, but they are necessary, and the future health of the plantation may depend upon their being carried out at the proper time. In some situations there is a sufficient market for the produce to pay the cost of extraction, but wherever possible the material should be taken out of the woods. Later thinnings, which will take place at about 5-year intervals during the life of the wood, should give some valuable return, and, where they are within reach of collieries and the railway rates are not prohibitive, early clearances at about the 35th year will be readily utilised for pit-props. In other places the timber will grow on to sizes useful for building construction and other industrial purposes, which in the case of coniferous woods will be generally after the 60th year; in some cases up to the 100th year, and in the case of oak very much longer. It should be noted that the whole costs, after the planting is finished, are in payment of labour.

The object of this very general statement of the method of working a forest is to show that throughout its life employment is increasing, and it is not until the age classes are fairly distributed through a normal rotation that a full and permanent effect is produced on rural employment.

In the normal working forest, which will include all labour from seed-bed to maturity, the number of men required will depend upon the silvicultural system adopted and the purpose for which the forest is grown. The numbers employed will vary from one to three per 200 acres. This is for production alone, but if the consequent work dependent upon, and in connection with, forestry, such as conversion of the timber and the development of minor industries, be taken into consideration, three men per 100 acres may be utilised with advantage. This figure is actually taken from work which has been proceeding in some of the fully developed Crown Woods.

<i>Delamere Forest</i> : 1,933 acres (planted).	
Number of employees	64 (one to 30 acres)
<i>Tintern Forest</i> : 5,365 acres (planted).	
Number of employees	153 (one to 35 acres)
<i>Forest of Dean</i> : 19,700 acres (planted).	
Number of employees	381 (one to 52 acres)

In the last-mentioned forest the timber and minor produce can be followed to their respective industries, which will show more clearly the labour-producing possibilities of a productive forest in working order.

The number of men employed in the Forest of Dean by the State and by other employers in connection with various wood- and industries is shown below:—

	Labourers employed.	Hauliers employed.
Forest Work	160	—
Timber	83	20
Pitwood	10	12
Cordwood	35	16
Turnery	35	7
Poles	—	1
Miscellaneous	—	2
	<u>323</u>	<u>58</u>

The cost of planting (labour and materials only, including fencing and drainage) on the Forestry Commission's areas in 1927 amounted to £6 5s. per acre. This does not cover the outlay on the beating up and weeding necessary for the full establishment of the plantation. The cost of these operations cannot be obtained with accuracy until we have had more experience, but probably an additional £3 10s. per acre must be allowed, making, say, £9 15s. per acre as the average cost for Great Britain.

These costs are below the general experience of private planters, and are accounted for partly by closer supervision, but largely by the scale of the operations which reduces very greatly the extent of fencing required. It is doubtful if even now some private planters recognise the influence which rabbits exercise on the finance of forests, particularly when very small areas are involved.

If the cost of rabbit fencing amounts to 6d. per yard—

1 acre square requires 280 yards—	£7 0s. 0d. per acre.
5 acres " " 620 "	—£3 2s. 0d. "
10 " " " 880 "	—£2 4s. 0d. "
100 " " " 2,780 "	— 14s. 0d. "

The wages earned by woodmen is normally the minimum agricultural wage of the district, but with careful supervision much of the work can be done at piece rates, and their living compares favourably with that of most other rural workers. On planting operations during March, 1928, the average wage earned by men on piece-work was £2 10s. per week.

A difficulty which at the moment is unavoidable, during the stage when planting and nursery work is the main outlet for

employment, is that a large portion of this employment must be of a casual nature. During these stages the main work is confined to the winter months and the whole of the men are not required during the other seasons of the year, and it is not until the forests have become a going concern that a fully employed staff can be contemplated. The permanent staff below the foreman grade is temporarily fixed at five per 1,000 acres, and, so long as planting is the main work, that is sufficient for the purpose. But this temporary recruitment of casual labour is not to be regarded as a permanent arrangement and is only rendered necessary with the view of providing continuous employment for the permanent hands. This continuity depends upon the speed at which the land in each forest unit is planted up.

An area of x acres is acquired which, by employing large gangs, might conceivably be planted in the course of one year. A very small number could then be employed for two or three years more in the necessary operations of cleaning and weeding, and after that, with the exception of a few who might be required for fire protection, destruction of vermin, and the grading of roads, &c., work would cease, and no further labour would be required until the growth had become sufficiently advanced to make thinning and other operations advisable.

Consequently the practice in most of the Commission's forests is to spread the planting over eight years so that the permanent hands may be kept employed continuously.

This rule can only be disregarded when, as is sometimes the case, the original area acquired is recognised as a nucleus for future extension, and this is of particular importance when the conditions are such that the tending operations are likely to be postponed until the later stages. It is opposed to the system adopted in Canada and elsewhere, where the lumberman throws large numbers into his timber limits, exhausting those limits as soon as possible, and then removing to other districts and recruiting such labour as may be available in the new surrounding. The principle we have in view is in direct opposition to this. We hope to establish settlements where men will become permanent workers interested in the forests as in the past they have been on so many private estates, and where opportunities will be found for advancement in a service which will be expanding during the next half-century.

It need not be suggested that it is possible, or even desirable, to dispense altogether with casual labour. There will always remain alternating periods of pressure and slackness in forest work. On private estates a full-time staff can be employed in the woods and during the slack season work can usually be found for them on other parts of the estates, but in the State Forests with no land outside the forest boundary this cannot be done.

Fortunately the slack time in forestry coincides with the late spring and summer season, the busy time in agriculture, and the men no longer required in the forest can be employed on the land, and this is made more secure if workers are provided with small holdings of their own.

Authority was obtained in 1924 to apply this principle by the creation of forest workers' holdings. The general conditions are to provide a house with three bedrooms and up to 10 acres of land, and to guarantee not less than 150 days' work annually in the forest. Full time-work is frequently given, but the man is free to work for himself or to obtain employment elsewhere during the slack time in the forest.

At the present cost of house and buildings, averaging about £550, and of land about £75, these, like other small holdings, cannot be regarded as economic, but the housing of the workers is an essential part of our work. The land acquired for afforestation is largely situated in districts where no housing exists, where there is no local unemployment, and where labour has to be imported from a distance. Sometimes transport can be provided, but it is frequently necessary, particularly in the Scottish Highlands, to provide temporary accommodation in bothies. This in many respects is unsatisfactory, and the authority to create these holdings for the permanent part of the labour is of proved advantage to the forest. The following reasons seem to be a sufficient offset to the financial loss in the erection of houses :—

- (1) Labour is always available throughout the year and can be got together quickly for fire protection.
- (2) Time is not lost through bad weather and the retention on the pay-list of men partially employed becomes unnecessary.
- (3) The labour becomes skilled and better worth the wage.
- (4) The provision of decent housing attracts the best families.
- (5) The land provided engenders a special interest in the home as a source of revenue.
- (6) The prospect of increased occupation, which the holders foresee, induces the parents to keep their older children at home. These children are employed in the nurseries.

The situation of the houses has to be considered with great care and with a view to the future development of the forest. Single houses in reclusal districts are not desirable and are naturally unpopular, and the choice is governed on the one hand by convenience for the work and on the other hand with full regard for the amenities of life and for the upbringing of a family.

But the bare creation of workers' holdings, whether economic or uneconomic, falls far short of the ideals we have in view. Our

aim must be not only to house forest workers, but to create forest communities ; this will be a plant of slow growth, and will require careful tending. We have to consider the moral as well as the material side ; houses alone are not enough. Churches, schools, clubs, recreation grounds, shops, will all be required to serve the growing needs of a forest population ; industries should spring up connected with, but developed far beyond the planting of trees and the tending of woodlands. We have many examples of this in the Middle Ages and later ; our forefathers built more surely than they knew. They raised self-supporting villages, housing those employed on the land, in the forest, and in other village industries. These served the generations up to the middle of the eighteenth century, up to the time when the whole country was swept by that great wave of industrial expansion which profoundly altered the whole basis of rural life. Then the village no longer knew itself, it lost its independence, the small farmer and the local craftsman were alike overwhelmed, there were few to replace them, the youth of the country was drawn into the vortex of the factory system. One of the results to-day is the serious congestion in our larger centres, constituting perhaps the gravest and most baffling problem with which we have to deal. No doubt the old order had its drawbacks, but certain advantages disappear with it, and this is particularly noticeable in the case of the agricultural labourer. His whole outlook has changed, he has become divorced from the occupation of the land, and from being an independent unit he became exclusively dependent on a money wage.

Under the changed conditions of to-day you cannot reconstruct the past, even if it were desirable to do so, but we may retain that part of it which is of value, and by re-establishing the worker in his connection with the land we may hope to place him in a position somewhat better than an entire dependence on a weekly wage.

It is hoped by these means to create a forestry service with a tradition behind it, to establish families and communities engaged in the earliest work of man, living up to their tradition, seeing before them the gradual ripening of the fruit of their labours, and conscious that the work in which they are employed will be of growing service to the nation long after they themselves have passed away.

The idea itself cannot be realised hastily, it requires time and experience to carry it out on really sound lines. It is not sufficient to lay down that so many holdings shall be made, so many houses built, so many acres provided ; it is not in this way that we may expect entire success. Standardisation is impossible ; local ideas, local customs, the habits and types of men, which vary greatly even in this small country, all have to be considered ;

differences of soil, climate, and markets, are all factors of importance which must have a profound influence on a scheme of this nature; nor can we afford to neglect the special outlook of women and children, whose importance in a small-holding scheme cannot be overestimated, and for whose needs opportunities of social intercourse are even more essential than for the men themselves.

It is too early to attempt any forecast of results; all that may be said at present is that a start has been made. Leave to begin was obtained in the summer of 1924, and there are now 537 holdings completed and 267 in course of construction; progress should continue at the rate of not less than 150 holdings per annum.

CLINTON.

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MALTING BARLEY.

THAT Norfolk should have been looked to as the source from which an article on Malting Barley for the R.A.S.E. Journal might emanate is probably not unfitting having regard to the fact that in this county barley is the staple cereal under cultivation, our acreage being somewhere in the region of 200,000, or approximately one-fifth of the total barley acreage for England and Wales. We also possess distinct natural advantages for the cultivation of this crop. Our climate and soil combine in producing conditions that give barley production pride of place in the economy of Norfolk agriculture, and the crop is invariably excellent from the point of view of suitability for malting.

There are many reasons why barley in this county and in arable agriculture generally is, if not the most important cereal, rapidly approaching that position. The principal reason is that the unremunerative prices for wheat, depressed as a consequence of heavy importations from the vast wheat lands of the New World, where the soil is nearer a state of virginity and climatic conditions are more suitable to rapid growth and harvesting, together with the failure of the nation generally to recognise the importance of obtaining a larger share of its bread requirements from the homelands, have led to the displacement of wheat as the principal cereal. The comparatively recent introduction of sugar beet into the economy of arable agriculture; the fact that barley is a much more easy crop to cultivate; that it does not hold the land for such a long period as does wheat, have all

lent themselves to an even closer concentration upon barley production. From seeding time to harvest barley requires five to six months only, whereas in the case of wheat the crop holds the land for ten months and sometimes more. Barley is a crop that can be grown after almost any cereal and, given judicious manuring, can be grown following a crop of barley. It thrives on chalk, sand, gravel and brick earth subsoils. The time allowed for the preparation of the seed-bed enables the land to be ploughed three times, thereby having a cleaning effect and avoiding the necessity for much hand labour which is indispensable in connection with wheat growing. Prices, too, on recent averages, are much better than is the case with wheat. The extensive acreage of sugar beet lends itself to barley as a succeeding crop and invariably barleys excellent in yield and quality follow the sugar-beet crop, due to the fact that it is usual for the farmer to spend a liberal amount of money on the latter in the way of artificial manures and labour. There is another reason, and that is the growing tendency towards three years' leys. Where wide acreages are farmed under sheep, barley is the predominant crop and the best results are obtained following the sheep fold. Barley is an ideal crop to sow with small seeds.

Although barley is grown for several purposes—for malting, for feeding, and as a catch crop for Spring feeding—I propose to confine my remarks to the production of barley which is used for malting.

The first consideration from the farmer's standpoint to ensure a crop of fine quality is the suitability of the soil and the preparation of the seed-bed. In order to command top market price for malting barley it is essential to aim at uniformity. The grower of barley must always have at the back of his mind the requirements of his market. The principal requirement of the maltster is absolute uniformity. This desirable result is not obtainable by haphazard methods. There must be a similarity in the soil throughout the field. The cultivations must be of such a character as will enable a uniform condition to be obtained in the seed-bed throughout. It is desirable to aim at a kernel of fair size, bold, and with a fine skin. The colour should be light; the ends of the kernel narrow. Coarseness in texture is a sign that the full starch complement is lacking. It is the maltster's aim to obtain starch which, in the processes of malting, becomes sugar. From the brewer's point of view anything else, *e.g.*, an excess of nitrogenous matter, is waste product and somewhat detrimental to malting. Lack of uniformity means irregularity in the malting. Grains which are not of the same feature will not malt at the same time. Great loss is thereby incurred and to protect himself the buyer must liberally discount the cash value of samples which show a lack of uniformity. It is a well-

known fact that when barley is being malted the best results are obtained when the shoot is one-third the length of the kernel. This does not mean that the shoot should extend outside the kernel to this extent but from the place of growth under the skin. After that the maltster stops the growth by placing it in a hot kiln. In the same way where farmers allow barley to shoot for feeding purposes they lose value where the growth is allowed to go beyond the same dimensions as are necessary for malting purposes. There is much that the maltster can do by regulation of the temperature, turning, etc., to bring the growth together, but he cannot use unlimited time or the malt will not be sweet. It is absolutely essential that the grain should be uniform in colour. Grains that have sprouted in the field are highly objectionable from the maltster's point of view, as they turn the malt on the malting floors and affect the beer.

Barley is not so definitely a rotation crop as was the case years ago. It is grown following every other crop in cultivation and may therefore be regarded as the utility cereal of the country. In the natural course of farming rotations barley almost always follows roots and here it is grown to great advantage. For instance, the land upon which mangolds are grown is invariably highly farmed with different dressings of artificial manures, and in addition the extra amount of cultivation previous to sowing the mangold crop assists its growth. As a result, after the removal of the mangold the land is generally very clean and therefore well prepared for the following ploughings and the reception of the barley crop. The same may be said of sugar beet, which now occupies a large proportion of the root shift, or swedes and other turnips grown so largely on the light land farms where the acreage is extensive and folded off, leaving a resultant highly valuable manure. In the latter connection the farmer must take the utmost care to ensure that the folding is done as evenly as possible and that the troughs from which the sheep consume artificial feeding stuffs are frequently moved, otherwise the barley is likely to be somewhat "patchy" and thereby difficult to ripen evenly. Best quality barley is grown on light to medium loams, but it is also quite possible to grow excellent barley on heavy soils. On this type of land, however, we often find the sample to be rather coarse.

With regard to sowing, it is widely recognised that on the average the best barleys are obtained from sowings made during the latter part of March and the first week in April. But the character of the season must to a certain extent govern this. An opportunity should never be missed when the land works perfectly. Sowings in the early part of February frequently lead to good quality barleys, but it is not general for the early sowings to return high yields. The early sown barleys frequently stand

up to drought conditions better than those sown later and this is a fact that is generally borne in mind in the drier districts.

The judicious use of artificial manures is profitable in the production of malting barley and higher yields and better quality are thereby obtained. The three chief manurial requirements, according to the peculiarities of the particular soil, are ammonia, superphosphates and potash. In connection with this point, farmers should make the utmost use of the expert advice that is available at the agricultural stations and institutes in their various counties, as in many cases yeoman farmers have not the opportunity of studying this question from a scientific point of view. There is also the question of cost. It is a very easy matter to be persuaded by a salesman into the use of an uneconomic mixture and one which might be unsuitable for the particular soil.

A matter of prime importance is to make sure of a thorough tilth for the reception of the seed. It is here that the experienced farmer is at a distinct advantage. The best seed-beds are obtained, generally, with the aid of the cultivator, light harrows and light rolls. It is not desirable to use a heavy roll, as it effects too great a compression of the soil. The object is to work the land up to a fine seed-bed and not down to a tilth with the aid of heavy rolls. The next important point is the matter of seeding. This is where the advantage of a fine seed-bed is apparent. It enables the seed all to be drilled at a uniform depth, a depth that allows the seed to be drilled so as to germinate regularly all over the field. Incidentally it is an item of the greatest importance in securing evenness of ripening. It is customary to drill about two inches deep. The amount of seed per acre is largely determined by the nature of the soil and the time of seeding. Experience teaches that the average seeding requirement is ten pecks to three bushels per acre.

After sowing, operations generally comprise light rollings and in some cases harrowings especially, where small seeds are to be sown, but it is necessary to exercise the utmost discretion in these operations, as it is easy to damage the growing crop by harrowing at the wrong time. It is safe to harrow just as the barley is peeping through the ground and whilst the blade is rigid, or to leave it until the barley has grown some inches, care being taken to see that light harrows with fine teeth are employed. The roll is particularly useful when the season is dry. If hand hoeing is done one of rather narrow type should be used on account of the fact that the plant is of the light rooting kind. Hand hoeing is very useful in wet seasons when harrowing cannot effectively clear the weeds.

The utmost judgment should be exhibited as to the time of cutting to ensure a good sample. Many farmers err in cutting barleys before they are ripe. The result is that the sample is

steely and can never command the highest prices. Barley should not be cut until it is dead ripe. It is far better to be a day or two late in this operation than a few days too early. This is particularly essential now that the self-binder is in such general use for harvesting the crop. After cutting, the barley should be allowed to lie on the ground or in the sheaf in order to kill the "set" in the barley and to enable the grain to benefit by the dews. Barley improves immensely in the shock or better still in the swathe, as a result of dews or light showers which give that mellow appearance to the kernels and make the sample so attractive for malting purposes. It is a noticeable fact that when the barley is cut dead ripe one or two dews will have sufficient effect, whereas barley that is cut a day or two before a state of absolute ripeness requires much more such "groundage" to mellow the harsh kernels. Experts are agreed that the best and most even samples can be obtained from barley that is made on the swathe, the turning enabling the ears to obtain the benefit of the dews and thereby ensure evenness of colour.

There is, then, of course, the question of stacking, which needs considerable judgment. Barley should go on the stack in a thoroughly dry condition. Wet barley quickly deteriorates. Stacking under ideal conditions enables the "sweat" to develop quickly and pass off within a few weeks leaving the barley all the better for its effect which is an aid in swelling and mellowing the grain.

The final operation after harvesting is that of threshing. This demands the personal attention of the farmer. He should be particularly careful to see that the machine is set sufficiently open to prevent the grain being nibbed. Bruised or broken kernels prevent successful malting. Much barley is spoilt by nibbing and bruising in threshing. It is better always to leave a little of the haulm on the grain rather than have the outer cells damaged. It is here that our maltsters and brewers have a grievance—not so pronounced at the moment as it has been in the past—but nevertheless a ground for complaint.

For some time past the farmers have been making a definite approach to the brewers with a view to ensuring a more effective appreciation of the excellent qualities of our home-produced barley by way of the use of a greater proportion of the British crop than has been the case hitherto. It is highly gratifying to know that many brewers are fully responding to the approach thus made to them. One large firm of brewers in Norwich has quite recently put on the market a Brown Ale and a strong Beer, also Stout, produced entirely from Norfolk and Suffolk barley. The quality of these beers fully bears out our assertions that imported barley is by no means indispensable in the production of high-grade beers. In Norfolk we

have reinforced our representations by evolving a scheme under which a great deal of our barley this season will be sold in guaranteed sample bags bearing a Trade Mark. The seller gives a guarantee that the sample contained in his bag has been drawn from mixed bulk. Each bag bears the registered number of the seller and will, we are certain, inspire the buyer with confidence that the bulk will correspond exactly with the sample. Every precaution is being taken to safeguard the right to use the guaranteed bulked sample bags and disputes arising out of the operation of this scheme will be referred to a Joint Committee of farmers and merchants. We hope that these bags will, eventually, become well known, and what they stand for appreciated, in every brewery and malting in the country.

We also regard it as imperative that there should be a substantial reduction in the disproportionate amount of taxation which is at present borne by the beer drinker. We consider it ample time that there should be some remission of the 3d. per pint taxation which the British national beverage carried, and we intend to apply all the pressure we can to that end. A reduction in taxation to the consumer of, say, one penny per pint, should stimulate the demand for this, the most wholesome of beverages, and incidentally improve the demand for its ingredients, barley included. The extent to which all concerned in the production of these ingredients have suffered is evidenced by the fact that the production of beer since 1913-14 to 1926-27 fell from 37,558,767 bulk barrels to 25,100,461 bulk barrels.

There has been a good deal of unwarranted misapprehension and criticism as regards the position of the brewer. Much of this has arisen through the strong opposition of certain brewers to the agitation for a customs duty on imported malting barley. But the failure of the Government to grant this measure of safeguarding should not be the means of promoting misunderstandings between the brewer and the barley grower. The one is essential to the other and co-operation should be exploited for all it is worth. Brewers are taking a keen interest in the growing of barley and are also revealing a keen interest in the farmer himself. They have made opportunities for inspection of their premises and have made explanations concerning the methods adopted with a view to stimulating all-round interest in the barley question from growth to manufacture. The brewer's position is undoubtedly misunderstood by many growers and there is a great deal of misapprehension concerning the use of substitutes in malting. An investigation of modern brewing methods reveals this view to be entirely erroneous. It can be safely stated that the overwhelming bulk of beer produced in this country is made from pure malt and hops with the addition of sugar and can be looked upon as the most wholesome

beverage obtainable. Much of the misapprehension as to chemicals is brought about by the use of chemicals in the cleansing of bottles, vessels and casks. The substantial progress that has followed the efforts of brewers manufacturing their beers entirely from English barley proves, conclusively, that as time goes on more and more English barley will be used as the experiments that are being conducted in the growing of barley, together with other important factors for promoting the production of the finest quality malting grain, should ultimately furnish irrefutable proof that this country can produce malting barley the equal of any that is imported. It is hoped that the result will be the replacement of the foreign by British barley, fostered by interest, enterprise and co-operation between all sections of the industry.

J. F. WRIGHT.

National Farmers' Union,
Norwich.

BAKEWELL'S LEGACY.

AMONG the improvers of British agriculture Robert Bakewell takes, by common consent, a high place. There have been others perhaps who set to work with higher motives, others perhaps who deserve in greater measure our personal regard. For Bakewell was a man of many faults. He was selfish and secretive, impatient of criticism, jealous of his rivals and given upon occasion to self advertisement. Among his contemporaries he made a good many enemies ; but he forced them, as he forces us to-day, to acknowledge the greatness of his genius and of his achievement.

The first and perhaps the most important of Bakewell's services was that he conceived an entirely new type of animal. If we turn to any of the writers on live-stock before Bakewell's time and read what they have to say about the "points" of cattle and sheep, we see at once that the value of the animal as a meat producer scarcely entered their thoughts. Almost without exception they insist on the importance of size ; also they have plenty to say about colours and horns and other more or less "fancy" points. But apart from these things it is quite clear that oxen were judged as draught animals, cows as milkers, and sheep as wool producers. Bakewell foresaw a demand for meat on the part of the masses of the people and he realised that a new kind of animal must be evolved to supply the new need. Moreover, the sort of animal that he saw with his mind's eye had, as we now know, the essential qualities that were required. Bakewell rightly argued that if animals were to be bred and reared

primarily for meat, then the time required to bring them to butcher's weight and condition was a factor of first-rate importance. He seems to have observed that the large, long-limbed and heavy-boned animals which were popular with his fellow-breeders were those that took longest to reach maturity and were the slowest to fatten. Therefore he favoured an entirely different type, a smaller and blockier animal, short of leg, fine of bone and broad of back.

Not only did Bakewell discover a new aim in breeding; he devised a new system. Many others before him had of course applied the principle of simple selection, had chosen their breeding animals with due regard to what were considered good qualities. It remained for Bakewell to discover, or at least to apply, two other principles; on the one hand, finding that sires did not always possess equal powers of stamping their qualities upon their offspring, he began to subject his male animals to a breeding test, postponing his final selection of stud bulls and rams until he saw what kind of progeny they were capable of producing. Incidentally he arranged as far as possible that these tests should be carried out in flocks and herds other than his own, preferring to let his rams out season by season rather than to sell them. On the other hand, Bakewell showed that inbreeding, instead of being a thing to avoid at all hazards, was, when judiciously used, a weapon of great value to the breeder. How much credit Bakewell deserves for this last discovery will never be known, for he never told how it came to be made. The likeliest theory is that he was faced with the alternative of using good home-bred sires, closely related to the rest of his stock, or of obtaining indifferent sires from other sources; and that he had the courage to try the former. In any case, Bakewell inbred both cattle and sheep to an extent that was unheard of before his time.

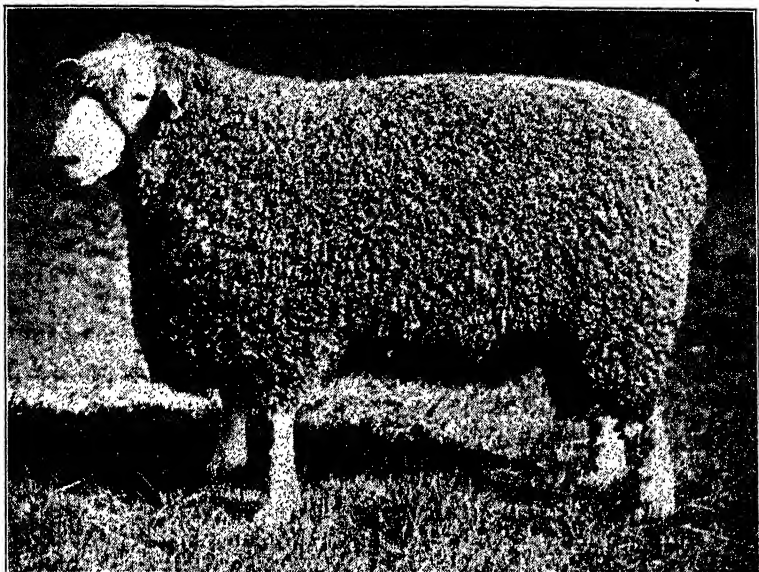
With the aims and by the methods thus shortly sketched, Bakewell produced two very notable breeds of stock, the Improved Longhorn Cattle and the New Leicester Sheep. At the end of his career it would have been hard to say which had won the greater success, or which was destined to exert the greater influence on the live stock of Britain and of the world. Yet now the Longhorn has dropped to the position of a minor British breed, and even that position it owes rather to its dairy qualities, which Bakewell entirely neglected, than to its capacity for meat production, which he did so much to foster. On the other hand, the influence of the New Leicester Sheep is probably as great as ever it was, and shows no sign of getting less. It is the purpose of this article to discuss the origin and influence of this remarkable breed.

It has often been said that Bakewell transformed the Leicester-

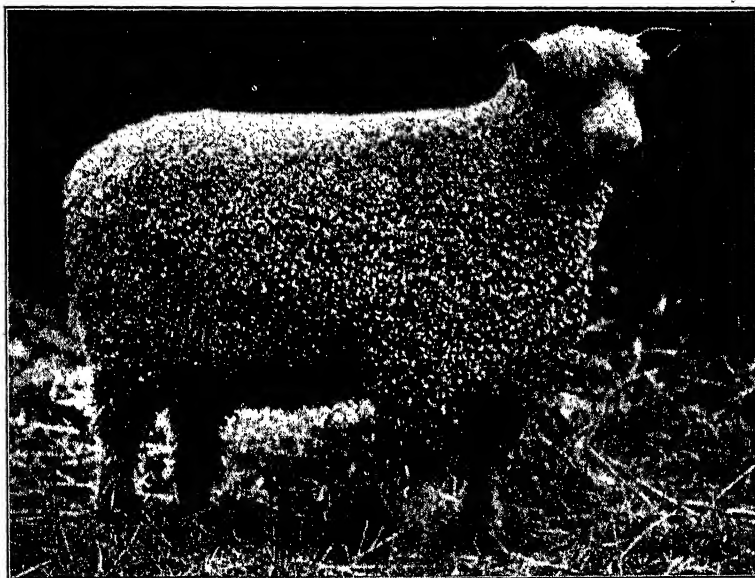
shire breed of sheep. It is indeed quite certain that there was an Old Leicestershire breed; it is described by several writers of the eighteenth century, who are in fair agreement about its appearance, though somewhat at variance as regards its merits as a commercial sheep. It is also quite certain that the New Leicester which Bakewell evolved was a very different animal, smaller, blockier, thicker of flesh and shorter of wool. But it is by no means certain that Bakewell obtained all, or even the greater part of his foundation stock from the local breed. Bakewell himself "chose to adopt a studied mystery on the subject," and none of his acquaintances or pupils seems to have discovered any very definite facts bearing on the question. Some writers maintain that he employed a cross with the Old Lincolnshire; others a cross with the Ryeland; while still others mention the Southdown or other of the short-wool breeds. But each of these statements is categorically denied by some other writer of probably equal authority. The most circumstantial story is that of the Rev. Robert Ferryman, as related by William Pitt in his *General View of the Agriculture of the County of Leicester* (1809). Mr. Ferryman says: "About the year 1747 there were a succession of wet seasons, which occasioned a great rot in the deep rich clays and in a short space swept away whole flocks. Some of the small and indigent farmers were ruined; but the more opulent and enterprising resorted to the high grounds near Fridaythorpe, in Yorkshire, where they purchased some neat small sheep which, crossed with the few that remained in their own fields, produced some very useful animals. As the numbers bred for a long time afterwards were not equal to the demand, they sent year after year to the same market. Jobbers were established who employed themselves in purchasing sheep on the Yorkshire Wolds for the use of the Leicestershire farmers and graziers. Mr. Bakewell engaged these jobbers not to offer their sheep for sale till he had seen them, and had taken out such as he thought would best serve his purpose. From these droves, or from the flocks so bred in his neighbourhood, and probably from a distant cross with the large broad-wooled Lincolnshire, he bred his first short-legged square-framed sheep which for a time were well received by the public."

If this story be true (and Mr. Ferryman seems to have been very well informed about agricultural affairs in Leicestershire) it is of interest to note that the East Riding of Yorkshire is the only district where the Leicester still maintains its position as the predominant commercial breed.

Bakewell took over the management of Dishley Grange from his father about the year 1755. In 1760 he let two rams at 17s. 6d. apiece, and for many years thereafter he got only a guinea or, on rare occasions, two or three. In 1776 he was



A CHAMPION LEICESTER SHEARLING RAM, BRED BY MR. WILLIAM JORDAN.



Photos by]

[Sport and General.

A CHAMPION WENSLEYDALE SHEARLING RAM, BRED BY MR. J. W. GREENSIT.

bankrupt. But at last the tide turned ; by 1780 he was getting ten guineas apiece for the hire of his choicest rams, in 1785 a hundred guineas and by 1789 three or four hundred. By the last date breeders were flocking to him from all over the country, and the influence of the New Leicester began to spread far and wide. Not that everybody was yet convinced. It was loudly maintained that the Dishley sheep were too small, too delicate, deficient in wool, unprolific, too fat and, above all, too dear. All of which was probably true. But they produced prime mutton a year earlier than any other existing breed, and buyers came back again and again.

The new breed spread its influence in various ways. In some districts it completely displaced the native stock, farmers either making an immediate change over or else "grading up" their flocks, by the continued use of pure Leicester rams, until they were indistinguishable from full-blooded Dishleys. This happened, for example, in the lower-lying areas of Northumberland and Berwickshire. A writer in the *Quarterly Journal of Agriculture*, describing the sheep fair of St. Ninian's in Northumberland in 1835, says that of some 20,000 sheep exposed three-fourths were Leicester draft ewes of the best quality. This policy of replacement led, of course, to occasional disasters, as when some enthusiast turned out a flock of Bakewell's sheep on to a heather grazing in the heart of the Lammermoors.¹ But for a time at least pure Leicesters were successfully bred for commercial purposes over large areas of the country.

The other main stream of Leicester influence was through the other long-wool breeds. In some cases, as in those of the Lincoln and Romney Marsh, the infusion of Leicester blood was postponed as long as possible, and was made grudgingly and cautiously. The Romney breeders foresaw the risk of losing the native hardiness of their stock ; yet they were obliged to turn to Dishley sheep for the essential early maturity and mutton type ; so that by 1840 it could be said "it may be doubted if there now exists a single long-wooled sheep in Kent, in which the influence of the New Leicester blood does not appear."² The Lincoln breeders similarly feared a diminution in the size of their sheep and a loss of weight in the fleece, but they, too, were compelled to fall into line. In other cases, as in Devon and Yorkshire, the infusion of new blood was made freely and enthusiastically, so that the local breeds were completely transformed and came to resemble Leicesters far more than their local ancestors. Not the least remarkable feature of this business was the success of the long-wool sheep-breeders in securing the

¹ *On the Breeding, &c., of Cheviot and Black-faced Sheep*, by a Lammermuir Farmer, p. 86.

² *Low, Domesticated Animals.*

benefit of the cross while avoiding its obvious dangers. The Lincoln men speedily recovered size and wool while retaining the improved mutton conformation; the Kent breeders retained the hardiness of their sheep and the characteristic features of its fleece while getting rid of its objectionable length of leg and flatness of side; the Wensleydale breeders were able to combine the prolificacy and the leanness of meat of their old local breed with a considerable measure of early maturity and a greatly improved conformation.

The influence of Leicester sheep was not confined to Britain. They were exported in great numbers to the Continent; they reached Australia before the Merino; and when Youatt wrote in 1837 they were the most widely diffused and the most important breed in the United States.¹

Towards the middle of the eighteenth century it began to be obvious that the Leicester breed was tending to split into two types. Ever since 1767 when the Culleys brought north their first Dishley sheep there had been a growing colony of Leicester breeders on both sides of the Scottish Border. Up till 1830 these men had continued to get rams, occasionally at least, from the south. But this practice ceased, and the Border sheep began slowly to be moulded into a distinct form, cleaner of head and limb, rather taller, more active, with a more stylish carriage of head and ear, and a whiter colour of face. Some authors have supposed that the change was brought about by a slight infusion of Cheviot blood, but there is no convincing evidence of this, nor is it necessary to postulate a cross in order to account for the divergence. This divergence, however, led to such difficulties in judging that it became necessary in 1868 to provide separate classes for the two types—"Border Leicesters" and Leicesters respectively. The two have been kept apart ever since, and both have continued to be bred with care and with skill. Not only has each retained all the good qualities of the original Dishley sheep, but each has recovered in a remarkable degree many of the valuable qualities which Bakewell neglected. One old criticism of the Dishley sheep was that they had "no size and no wool"; it is for example recorded that one of the immediate consequences of the infusion of Leicester blood into the Romney Marsh was a serious loss of scale. Now the Leicester is undoubtedly the bigger sheep of the two. But it is needless to insist that the modern Leicesters are big enough—they tend indeed to be too big for the modern fashion. As regards weight of fleece neither of the Leicester breeds can vie with the Lincoln, but the clip reaches a very satisfactory weight; and as to quality the wool is, in its own class, second only to that of the Wensleydale.

¹ William Youatt, *Sheep*.

Still more remarkable is the manner in which breeders have managed to recover prolificacy. Apparently twins were exceptional in Bakewell's flock towards the end of his life. In 1812 Culley¹ wrote, "We generally reckon one-third of the ewes to have twin lambs," and we may be sure that he would not understate the case for his favourite breed. Nichols,² who recently collected statistics of 133 British flocks of various pure breeds, found that the Border Leicester stood first with a fall of 207 lambs per hundred ewes and the Leicester second with 152. Even without these data one would have had little hesitation in placing the Border Leicester, Wensleydale and Leicester among the most prolific of our modern breeds.

One defect of the Dishley sheep has indeed never been entirely removed. When Bakewell was told that his mutton was too fat, was coarse in grain and lacking in flavour, he replied that his mutton was not for the sideboards of fine gentlemen, but for the masses. Since those days, however, the masses have acquired a nicer taste, and although Bakewell's successors have done a good deal to remove the grounds of the old complaint, yet no person of normal likings puts Leicester mutton in the same class as that of the true down and mountain breeds. This development of public taste would probably long ago have driven the Leicester into a position of minor importance had it not been for the discovery of a special use for it, that of crossing with the mountain breeds.

All the mountain breeds of sheep found in Britain are of moderate or small size. Their most characteristic faults of conformation are narrowness over the shoulder and a certain thinness of flesh over the back. On the other hand they commonly show good development in the hind-quarter and their mutton is lean, firm in texture, and very full flavoured. If ewes of this type are to produce the most useful class of lambs, they must be mated with a ram of relatively large size, broad of back and with a pronounced tendency to fatten. Moreover the cross-bred lambs must be well clad at birth and otherwise fairly hardy, in order that they may survive inclement weather in the early days of life. Finally, as physical difficulties at lambing are always to be expected where a small breed of ewes is mated to a big ram, regard must be given to special points of conformation in the latter; too much width of head, for example, must be avoided.

It soon became evident to mountain flock-masters that the Dishley sheep possessed the desirable qualities in an eminent degree, and crossing began to be attempted before the end of

¹ Bailey and Culley, *General View of the Agriculture of the County of Northumberland*.

² J. E. Nichols, "Fertility in Sheep," *Jour. Min. Agric.*, Dec., 1924.

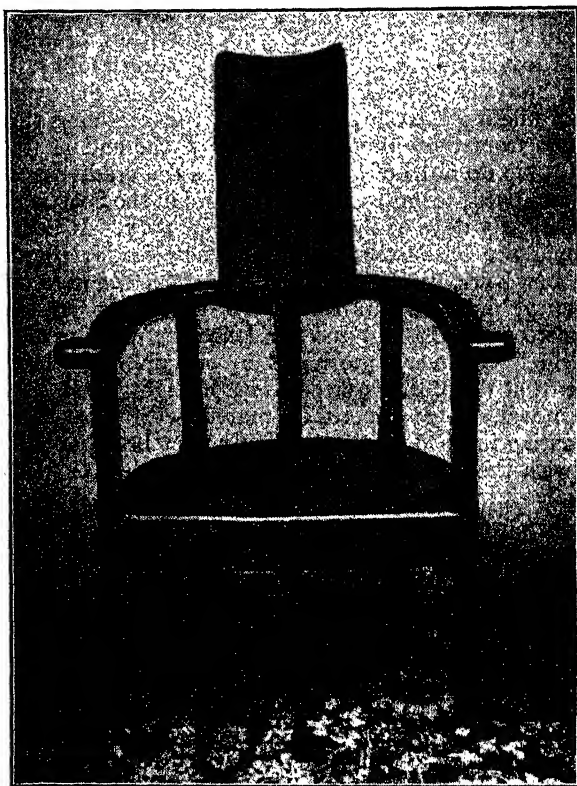
the eighteenth century. It is true that at first the tendency was to go to work in the wrong way—to attempt a gradual infusion of Dishley blood into the ewe stocks. Thus Douglas,¹ writing in 1798, mentions “many speculations concerning the advantages which may be obtained by crossing the Dishley and the Cheviot sheep” and one of his illustrations was that of a “Cheviot Ram with some mixture of the Dishley blood.” This process, which proved so successful in the case of lowland long-wool breeds, was doomed to failure in the case of mountain sheep, because it led to a fatal loss of constitution and of travelling ability. It was not long, however, before the right method was discovered, the method of making a clean first cross and of removing the cross-bred lambs from the mountain pasture at the end of their first summer. We do not know who deserves the credit for starting this system, but it seems to have sprung up in the Scottish Border area in the early days of the nineteenth century. It is not mentioned by Lowe in his account of Berwickshire farming written in 1794, but Kerr, in his “General View” of the agriculture of that county, published in 1809, says that “An intermediate breed between the Cheviot and the Leicester, usually called half-bred sheep” was very prevalent in certain districts and he mentions that draft Black-faced ewes, brought down from the Lammermoors, were sometimes mated with Leicester rams. Low,² writing in 1845, says: “The Cheviot breed amalgamates readily with the Leicester; and a system of breeding has been extensively introduced for producing the first cross of this descent.” Speaking of the Black-faced Heath breed (under which he included what are now the Swaledale, Lonk and Rough Fell breeds as well as the Scotch) he says: “A species of crossing has been remarkably successful, namely, the employment of males of the Leicester or Southdown breeds for a first cross. The lambs, the result of this mixture, are excellent, rising to a much greater weight than those of pure Black-faced blood. Great numbers of this mixed race are now produced, and an increased source of profit is thus opened to breeders by the sale of their young sheep. Of these crosses the best has been found to be with the Leicesters.”

The original idea in producing these cross-bred sheep was that they should be fattened for the butcher. However, by the middle of the nineteenth century there was an increasing tendency, on lowland or semi-upland farms, to substitute them (especially the half-breds) for pure long-wool ewes. In 1862 Wilson wrote: “In one or other of these ways cross-bred flocks are increasing on every side. So much has the system spread in Berwickshire that whereas, in our memory, pure Leicesters were

¹ *General View of the Agriculture of the Counties of Roxburgh and Selkirk.*

² *Domesticated Animals of the British Islands.*

the prevailing breed of the county, they are now all but confined to ram-breeding flocks."¹ With the increasing importance of this aspect of the sheep industry the Border Leicester breed has been specialised as a crossing sheep, and it is as such that it retains its importance. The same is true to a large extent of the Wensleydale which, as already indicated, is full of Dishley blood.



BAKEWELL'S CHAIR, PRESENTED TO THE SOCIETY AT THE LEICESTER SHOW, 1896, BY THE LATE MR. H. C. WOODCOCK.

(See R.A.S.E. "Journal," Vol. 57, 1896.)

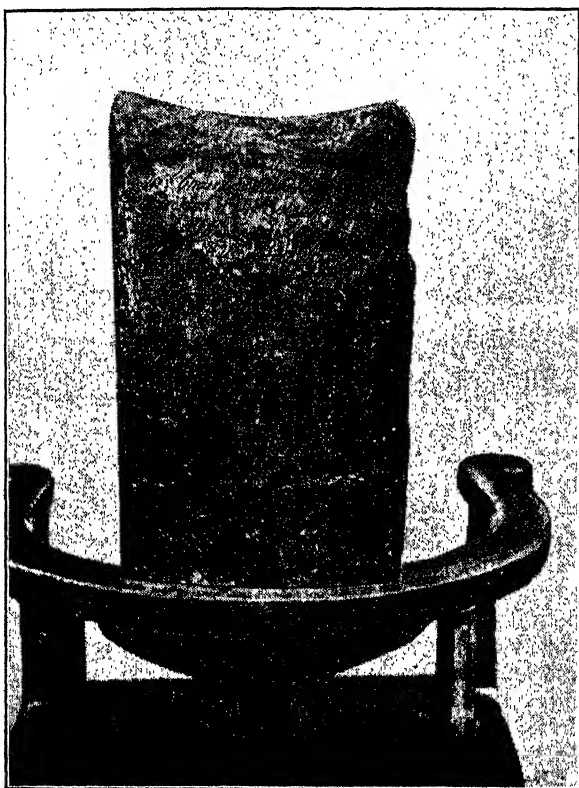
The Border Leicester only is used with Cheviot ewes, producing what is now widely known as the half-bred.² With the various Black-faced breeds either the Border Leicester or the Wensley-

¹ J. Wilson, *British Farming*, p. 470.

² These sheep are sometimes erroneously described as Border Leicesters in Midland and Southern districts.

dale, or less frequently the Leicester is used, producing the various types known as grey faces, "crosses," mules, Mashams, &c.

With the decline of tillage and the rise in labour costs half-bred sheep have spread during recent years with great rapidity. The ewes are hardy enough to live throughout the year on ordinary pastures, with a moderate amount of artificial food during



BACK VIEW OF CHAIR, WITH INSCRIPTION.

the lambing season. They are extremely prolific, yielding normally between 150 and 175 lambs per hundred ewes. They are good mothers and require comparatively little shepherding. They produce a heavy clip of wool of useful quality, and when mated to rams like the Oxford, Suffolk, Hampshire, Ryeland, &c., their progeny, whether as lambs or tegs, are valuable butchers' animals.

Here and there half-breds are themselves giving place to

mule and Masham ewes, which will bear a still less intensive system of management; but most of these crosses from the Blackface are still taken by butchers, with whom they are exceptionally popular.

Taking it all in all then, Bakewell's legacy to British agriculture is no small one and his name deserves to be remembered with gratitude.

J. A. S. WATSON.

The University,
Oxford.

JOHN ELLMAN OF GLYNDE; HIS LIFE- WORK AND CORRESPONDENCE.

THOSE who appreciate the Southdown sheep, not only for its great commercial qualities of mutton and wool, but also because it is certainly one of the most beautiful and symmetrical animals of the ovine race, are ever under a deep debt of gratitude to the man who first attempted the improvement of the breed—John Ellman of Glynde.

Like all our great breed makers, John Ellman must have been a man of exceptional qualities, and great tenacity of purpose, for no man who sets out to improve a breed finds his path easy, so manifold are the pitfalls to be encountered in breeding and mating; but in the face of all difficulties he pursued his way to the goal he had set for himself, namely the transformation of the speckle-faced Heath Breed of the South Downs into commercial rent-paying sheep.

The writer of this article is lucky amongst historians of this great flockmaster; for, through his long connection with the Southdown Sheep Society, he has been brought into touch with descendants of the Ellmans and, through their courtesy, he has been privileged to see farm and account books, as well as many private letters and original documents belonging to John Ellman of Glynde and his sons, John Ellman, Junr. and Thomas Ellman, both of whom followed in their father's footsteps and became famous flockmasters.

John Ellman was the son of Richard Ellman who occupied a farm at Hartfield, Sussex, at the time of his son's birth—October 17, 1753, and from thence he removed to the Home Farm, Glynde, in 1761 with his two sons, John and Richard. John Ellman was then about eight years of age, and it is related of him that even in his early boyhood he was very keen to learn all he could about agriculture and would spend his evenings with the Vicar of Glynde (who afterwards became his father-in-law) studying anything that concerned the welfare of the country. Richard

was always keen on agricultural subjects, but John took an interest as well in all the political questions of the day ; he had



JOHN ELLMAN.

advantages over his father, for he had studied more, and, his circle of influential friends being larger, he had more scope for influence in his time.

John Ellman succeeded to the Home Farm, in 1780, and being a man of decided opinions he at once began to carry out his agricultural theories such as improving the Southdown sheep, Sussex cattle, and farm horses ; he also attempted to produce as much food as possible by enriching and reclaiming the land ; and he found time for writing and speaking on agriculture.

John Ellman was twice married, the first time in 1783 at Hartfield to Elizabeth Spencer, whose son John was born in 1787, and who succeeded his father in the farm at Glynde, which he occupied for many years and from which he removed to Landport near Lewes. In 1794 Mr. Ellman married for the second time, the lady being Constantia, daughter of the Rev. T. Davis, Vicar of Glynde.

The Home Farm at Glynde comprised 580 acres, of which 150 were Downland, 150 corn, and 200 hay, some 80 acres being "Marshlands." It was well equipped with buildings, yards, barns, &c., which were added to during the Ellman tenancies, while sheep sheds erected by the great flockmaster as his flock prospered can be seen to this day.

According to a paper revised by Thomas Ellman in 1860 and published in the *Report of the Proceedings of the Southdown Sheep Club*, 1893, Thomas Ellman dates the origin of the improved Southdown sheep to 1778, when his father's energies were first brought to bear upon agricultural improvements with the assistance of the Duke of Bedford and Coke of Norfolk (amongst other noblemen) whilst Thomas Ellman also recorded the fact that his father frequently expressed the difficulty of maintaining a good breed, rather than raising it—a difficulty experienced by all who have had anything to do with live-stock improvement and the foundation of breeds.

John Ellman himself wrote that Southdowns were formerly of a small size and far from possessing a good shape, but at the time of the Glynde Flock Sale they were so greatly improved that they could hardly be recognised as the same breed. Undoubtedly there was a good foundation to work on, but breeders do not always take advantage of good foundations upon which to build and therein lay Ellman's genius. Unlike many noted improvers of sheep, John Ellman set out to improve not only the carcass, but the wool of the Southdowns, and thus, his flock being well established, he mated with the utmost care to effect improvement in both these respects. In the Glynde Flock Account Book in 1819 it is shown (in Ellman's own handwriting) that to improve the colour and the wool of the flock he mated a ram lamb, close made, of thick wool, and good colour, with 50 ewes, 10 of which he had chosen as ram breeders, all being rather light in colour with long wool and rather thin necked. To a ram lamb which had long fine wool and was rather high on the legs, went 50 ewes

(10 ram breeders) rather light in colour, short in their wool and on the leg. It was by matings such as these that the Glynde Flock improved out of all knowledge.

A proof of the improvement wrought in the wool alone is shown in the fact that whereas the average weight of a South-down fleece at the time Ellman started his improvements was from 2 to 2½ lb. an average for 21 years from 1802 for rams was 4 lb. 14¾ oz. and for ram tegs 3 lb. 13 oz. ; in some cases the fleece even scaled 5 lb. The highest price for the Glynde wool came out at 3s. per pound, realised in 1809. The ewes also improved in value. The price obtained for old ewes in 1782 was 13s. 6d. and in 6 years Ellman had increased this to 23s. Ewe lambs in the same period increased from 9s. 6d. to 15s., and wether lambs from 10s. 6d. to 16s.

No account of John Ellman's work or his correspondence would be complete without quoting the remarks of Arthur Young who frequently visited Glynde, and who was a close personal friend of the great flockmaster. These remarks occur in the famous "Annals."

Young wrote : " Mr. Ellman's flock of sheep is unquestionably the first in the country. There is nothing that can be compared with it ; the wool the finest and the carcass the best proportioned ; although I saw several of the noblest flocks afterwards . . . some few had very fine wool, which might be equalled to his, but then their carcass was ill-shaped : and many had a good carcass with coarse wool : but this incomparable farmer has eminently united both these circumstances in his flock at Glynde . . . He has raised the merit of it, by unremitted attention above the rest of the neighbouring farmers, and it now stands unrivalled."

FLOCK MANAGEMENT AT GLYNDE.

Methods of flock management do not vary very greatly through the passing years, but the system in vogue at Glynde may be of interest. It is culled from Arthur Young's notes, Ellman's article in Baxter's *Library of Agriculture*, and from a letter written by John Ellman to Sir John Sinclair.

The Glynde Flock consisted of 500 breeding ewes of three ages, besides rams and fattening sheep, and this total had increased to 1,450 of all kinds in the summer, sufficient live stock one would think for the 580 acres without the 140 head of cattle, farm horses, and oxen that were also maintained !

Rams were turned in with the ewes during the last fortnight in October and were left with the ewes for about five weeks. Each ram had 50 ewes allowed him, and Ellman was one of the first flockmasters to put certain rams to selected ewes and pen them apart from the rest of the flock. He used to take out the

60 best ewes in the flock and put them to his best ram, saving the male progeny as rams.

Ellman was one of the pioneers of "flushing" his ewes before service in order to promote prolificacy, and as an aid to this he would also save twin ram lambs, believing that: "Twin getting is hereditary in rams as well as in other branches of the brute creation."

When the ewes were $4\frac{1}{2}$ years old they were drafted out, about 220 ewe lambs being retained to make up the flock and for sale. These lambs were sent out to keep amongst farmers in the Weald of Sussex until March, when they were sent back to Glynde and took their place in the breeding flock when they were 18 months old.

John Ellman was a great believer in folding sheep on arable or grassland, realising the benefits that accrue from this practice, and especially from bringing in the sheep at night off grass to fold such arable crops as tares, clover, and turnips. Again, he believed that by folding the sheep were kept from the grass while the hoar frost and heavy dews were upon it; these being the chief causes of red-water in sheep.

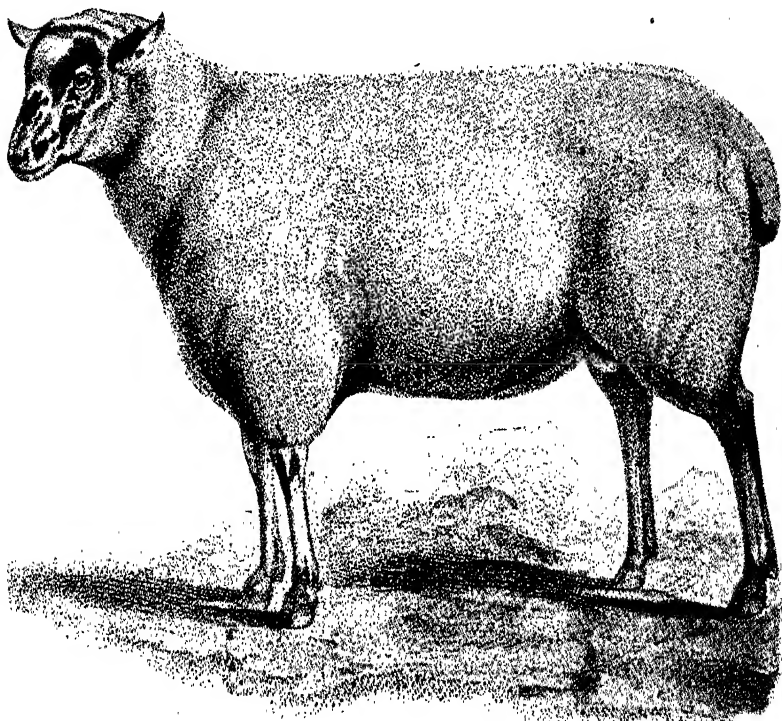
The Glynde Flock used to get turnips and hay during the winter and the turnips were pulled some days before the sheep went on them. Sainfoin was freely cultivated, the flockmaster being a great believer in it as hay. In the spring the flock had rye, then rye-grass and Downland grazing, together with after-math clovers, tares, rape, and again swedes and turnips with hay.

In bad weather the ewes lay in the big yard and sheds which contained 355 square yards and which held in comfort the 500 breeding ewes, otherwise they were folded every night, except just before lambing, and lambs were as a rule, weaned when 12 or 14 weeks old.

The Southdown sheep was steadily making progress throughout the country, and as steadily was John Ellman making his name as a leading flockmaster—to such an extent that visits were paid to Glynde by many of the Royal Family, and by all the leading agriculturists of the day. George III and George IV were both keenly interested in the good work of the Sussex flockmaster. Francis and John, Dukes of Bedford, the Duke of Sussex, Coke, Earl of Leicester, the Duke of Richmond, and the Earl of Egremont were frequent visitors at Glynde, while John Ellman, in his turn, visited Woburn and Holkham and was present at the "Shearings" and the "Clippings," and was one of the founders of the Smithfield Show, as he had been of the Lewes Fat Stock Show, and the Sussex Agricultural Show Society.

A public-spirited man, as well as a great farmer, Ellman did much to improve the condition of the agricultural labourers, while he undertook a great deal of work in connection with the

draining of the levels around Lewes and Glynde. This, coupled with his undoubted services to sheep breeding and his many other activities in farming and for the public weal, led to his being made Deputy-Lieutenant for Sussex (as was afterwards his son, John Ellman, junr.) with the offer of a title, first a Baronetcy, then a Peerage (the Earldom of Glynde), but Ellman preferred



TWO-SHEAR SOUTHDOWN RAM, BRED AND EXHIBITED BY MR. JOHN ELLMAN, 1798.

(Reproduced from the "Proceedings of the Sussex Agricultural Society.")

to remain a plain yeoman despite the pressure put upon him to accept a title; and so the honours were steadfastly declined.

Although such a busy man engaged in farming, sheep breeding, and public work, John Ellman had time to conduct a voluminous correspondence; for, as may be imagined, there were many orders for sheep to attend to, and frequent appeals for advice had to be answered.

Amongst those who purchased ewes and rams from Ellman was Coke of Norfolk, whom Ellman had visited at Holkham and had advised as regards his flock. In the Glynde ledger for

1793 we find this entry: "Received a letter from Mr. Young [Arthur Young?] in which he engages for this year 80 of my ewes at 35s., 40 of my ewe lambs at 21s., and 100 ewes from the Shoreham flock at 31s. 6d. for Mr. T. W. Coke of Holkham." Ellman also purchased 500 ewes and lambs from the best Sussex flocks for Mr. Coke.

WAGERS AND ORDERS.

So quickly did the breed adapt itself to Norfolk that we find Mr. Coke issuing a challenge to John Ellman, as related by F. P. Walesby in his Memoir of the Great Flockmaster: "Mr. Coke will bet from £100 to £500 that he produces ten two-shear or three-shear Southdown wethers that shall beat ten of either age of Mr. John Ellman's own breed, to be produced at London between the 20th and 30th of May, 1798. Also £100 that he produces at Woburn Sheep Shearing in 1798 ten Southdown wether lambs born in 1797 being the half of twenty to be marked now, against ten of Mr. Ellman's chosen from the same number in like manner in the presence of some respectable person. Also 20 guineas on a two-shear Southdown ram, naked, to be shown at Woburn at the same time. (Signed) T. W. COKE, Woburn, June 14th. Witness A. Y."

This challenge was sent through Arthur Young, who added a covering letter:—

To Mr. John Ellman.

DEAR SIR,

Here is a challenge from Mr. Coke, who expects to become a top letter in the Southdown Breed, whether you accept or reject it. If you accept he is clear of beating you; if you reject you are sunk as a tupman in the estimation of a very numerous party here from various counties. You are at liberty to get your neighbours to join with you in the bet, but the flock must be yours as he wishes to beat the leader.

I think you will not let this go by, and occasion so much talk against you as will be bandied about all England, but you must write your answer to me directly, not taking more than three days to consider of it.

I shall be very sorry if you let Sussex be bullied out of their fair reputation, and you really deserve to sink if you do not come into some of these bets.

I have backed you five guineas with Bevan that if you accept you win. Mr. Hall has also backed you a rump and dozen.

Let me have your answer under cover to Sir John Sinclair.

Yours faithfully,

ARTHUR YOUNG.

Woburn Sheep Shearing, 1797.

Unfortunately there is no record extant as to the result of this contest.

By now orders for sheep were pouring in and to Mr. John Ambrose of Copford, Colchester, in 1794, Ellman wrote as follows : " I have not yet been able to buy you any ewe lambs as the price has yet been high and ewe lambs from the very best flocks very much engaged. We have had rather a full Fair at Selmiston, not many sold, wethers fetched from 21s. to 28s. and ewes 17s. to 21s. Wether lambs 12s. to 15s. and ewe lambs up to 12s. 6d. As there was a large quantity driven home I expect I may have an opportunity of buying before Lewes Fair."

To so keen a farmer as John Ambrose it is only natural that Ellman would deal with the state of the crops around Glynde and touch on all those little matters so dear to the heart of a farmer. Therefore we find him continuing : " Turnips are very bad indeed but the late rains have put another face on our Downs and meadows, where the grass seems growing very fast. I am inclined to think we have had a good crop of wheat in Sussex, as that which I have thrashed seems to yield well. Prices at Lewes for grain yesterday were wheat 48s. to 50s., barley 30s. to 32s., old oats 24s. to 27s., new oats 21s. to 23s., peas 48s. to 50s. per quarter, while tares were 12s. to 15s. per bushel. I have not yet sold my wool and prices are much the same as when I last wrote, best wool from 15d. to 16d. per pound."

In October of the same year Ellman wrote to John Bedwell of Cheltenham, acknowledging a Bank draft and hoping that the sheep safely arrived at Cheltenham. He went on to say that at this Sheep Fair at Lewes stock in general met a brisk trade and many buyers returned home without purchasing half their quantity. Wethers made from 22s. to 28s., ewes 15s. to 20s. and wether lambs 12s. to 18s., and he concluded by hoping Bedwell would visit Glynde.

One can picture the assembly of flockmasters on the old Fair Ground on Lewes Downs in their knee breeches and top boots, and one can imagine the stately form of John Ellman thus equipped with his blue cloth coat and brass buttons, light coloured waistcoat and loosely folded white necktie, wearing on his head a hard, high-crowned hat.

Sir John Riddle was yet another purchaser of Glynde sheep, but apparently in 1795 there was something of a hitch in the proceedings, for we find John Ellman writing : " As the season is so far advanced I should advise you to wait another year before purchasing Southdown sheep, as our sheep fairs are nearly over and it would be difficult to get any good ewes, and I have not saved any of my own, not hearing from you as soon as expected. I wrote to your steward, Mr. Wallace, who informed

me that you were letting your Bedford Estate, and he could give me no account whether you wanted them to go into Scotland or not, consequently I sold all my own except some rams which I have, very good. I shall be happy to supply you another year with some of my own breed of sheep, or I will purchase any for you in this county.

"I should be fearful of sending them in a vessel—any number of them together—as they would be liable to be suffocated without proper partitions to divide them into small numbers, and which I fear would be found difficult in a collier."

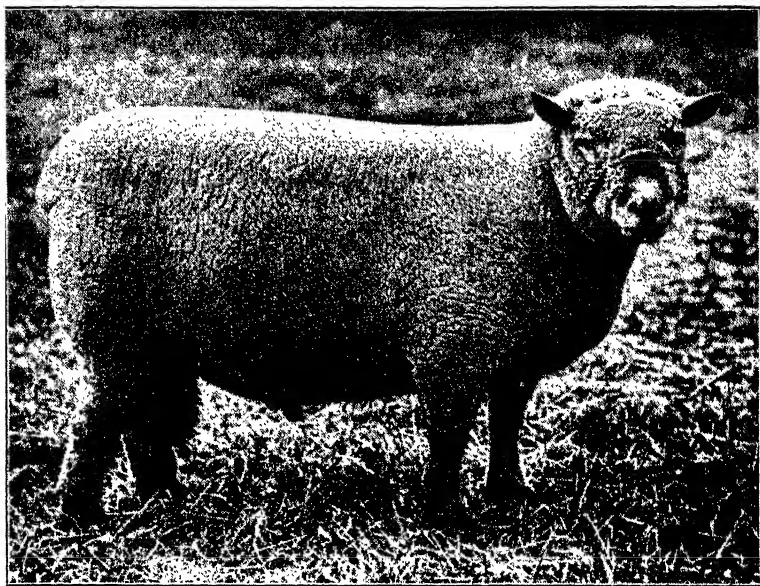


Photo by]

[Sport and General.

A MODERN SOUTHDOWN SHEARLING RAM, BREED BY H.M. THE KING.

Still more orders flowed into Glynde during this year, and the thoughtfulness of Ellman for his clients is well exemplified in the following letter written in October, 1795, to Mr. Park, Agent of the Earl of Shaftesbury.

Ellman wrote: "I am this moment favoured with yours of the 3rd inst., I sent off the sheep yesterday morning and should have waited your answer but a gentleman from Bridport that has bought 20 of my ewes sent his drover for them, and I thought it would be an accommodation to both to go together, I expect they will reach St. Giles' House about Friday next. I have sent you 60 ewes and 2 rams, which I hope will please, namely 30 of

my best ewes and 30 young ewes. I shall charge only one guinea each for my young ewes, a price much below that which I mentioned in a former letter, as they are not all of my own breed, though all got by my rams. The best ewes I charge the same as I have sold all the others of that sort, namely two guineas each and shall charge you nothing but the expense of taking them to St. Giles' House which Mr. Davies who comes with the sheep will inform you. The amount of the sheep you may remit by draft in London or any other way most convenient."

In a postscript Ellman informed Mr. Park that he had a good sale for sheep and lambs at Lewes Fair on October 2nd and many buyers went home without buying half the number intended. In the postscripts too, is included the bill for the sheep sent to the Earl of Shaftesbury, namely 30 best ewes at 2 guineas, 30 young ewes at 1 guinea, and 2 rams at 15 guineas, total £126.

It must not be thought, however, that John Ellman always remained contented with such small prices, for in 1796 a ram from Glynde made 50 guineas to Mr. Goodenough in Dorsetshire, and "from that time onwards there was a regular demand for all the rams Mr. Ellman could supply at prices varying from 20 to 100 guineas per season."

Again Francis, 5th Duke of Bedford, bought 200 ewes for 500 guineas from Ellman and also gave him 300 guineas for the use of a ram for two seasons, this being Ellman's record price for a ram. Eventually the price for Glynde draft ewes rose to 3 guineas apiece and later on to 4 guineas.

Ellman was ever ready to assist his fellow flockmasters, and thus he was a prime mover in getting the date of Lewes Fair changed from October 2 to September 21, while a few years later he was instrumental with others in getting Lindfield Sheep Fair abolished "owing to the great inconvenience from driving sheep and lambs as far as Lindfield without any counterbalancing advantage to the buyers." This Fair was afterwards transferred to Lewes.

ARTHUR YOUNG AND GLYNDE MUTTON.

As I have remarked before, Arthur Young and John Ellman were close friends, and it was customary for the latter to send the great agricultural writer legs and haunches of Southdown mutton. One such present is immortalised in the *Annals* thus:—

From Mr. John Ellman, of Glynde, to A. Young.

February 28, 1793.

DEAR SIR,

Beg leave to present you a haunch of Southdown mutton from one of those sheep you saw when last favoured with your

company at Glynde, believe you took the measure of one, but as I am not certain it was the same that I have killed here send you the measure with the live and dead weight of a true-bred Southdown wether (3 years old), slaughtered at Glynde, the 21st instant :—

Long	28 inches.
Long, neck	11½ inches.
Thick	18 inches.
Thick, chine	17½ inches.
Girt	53½ inches.
Girt, chine	51½ inches.
Girt, neck	16½ inches.
Girt, fore-leg	3 inches.
Girt, hind-leg	3¼ inches.
Height, fore	28 inches.
Height, hind	29 inches.
Loin	10½ inches.
Live Weight, 192 lb.	

Next morning the carcass without blood and offals weighed 125 lb.

When cut up on 24th inst. :—

First fore-quarter weighed	29 lb. 0 oz.
Second fore-quarter weighed	28 lb. 12 oz.
First hind-quarter weighed	33 lb. 8 oz.
Second hind-quarter weighed	32 lb. 0 oz.
Loss	1 lb. 12 oz.
<hr/>	
125 lb. 0 oz.	

Had one side cut in joints, and weighed :—

Haunch	23 lb. 0 oz.
Loin	10 lb. 4 oz.
Neck	12 lb. 0 oz.
Shoulder	11 lb. 12 oz.
Breast	4 lb. 8 oz.
Loss	0 lb. 12 oz.
<hr/>	
62 lb. 4 oz.	

The above measure and weighings, as exact as possible, I flatter myself will do credit to the Southdown sheep. The quarters were divided in the usual way, leaving one short rib to the hind and twelve to the fore. The hind-quarters of a Southdown sheep are mostly heavier than the fore, which I judge a merit in the breed, as our butchers generally sell the former at one penny per pound more than the latter, believe that legs and saddles of mutton are a ready sale in most places. I last summer had the opportunity of seeing a very fine four-year-old wether of a breed high in repute, which the fore-quarters weighed 10 lb. each more than the hind. I have often heard you exclaim against the Southdown sheep, for being somewhat higher behind than before, I cannot as yet satisfy myself it is any de-

merit, neither do I think that length of neck and carcass ought to be deemed such. Straight barrel, wide chine and loin, undoubtedly are merits, as are thin neck, clean head, and small bone. I forgot to mention that one of our Lewes butchers bid me 10*d.* per lb. for the carcass, but as I did not intend selling any part of this sheep, can say nothing about its value.

On receipt of the haunch of Southdown mutton, Young writes:—

“I desired the favour of a party of flockmasters, &c., to partake of this joint of mutton, and all opinions were united that it was incomparably good, and yet of a very extraordinary degree of fatness, yet the flavour exquisitely fine, in a word it did credit to Mr. Ellman's breed and grazing.”

Yet another present was forthcoming in January, 1797, and Young wrote to Ellman thanking him:—

“Your mutton came safe yesterday morning and part of it, the leg, was dressed that day, roasted. We all of us agreed in the excellence of its flavour. You kept it rather too long we think, for the loin was not perfectly sweet, but the leg was very tender and sweet. In its proportion it is nearly equal to Wales' last Romney, an account of which I gave you at Glynde. What is the age? Is it a three-year-old or rising four, or is it a two-year-old rising three? Another point which we wish to know is the weight of that quarter, part of which you sent; the haunch weighed about 16 or 17 lb., the leg of it was about 11½ lb., the remainder the loin. Where then is the other 10 lb., making together the quarter 26 or 27 lb.? If you will answer Lord Egremont upon these points I shall be obliged to you. I shall do myself the pleasure to call at Glynde about the middle of next week.”

Walesby in his *Memoir of Ellman* has an excellent anecdote apropos of the Glynde mutton and its excellent flavour, in which he relates:

“When the (then) present Duke of Bedford was Lord-Lieutenant of Ireland, he was once, when dining with Lord Sligo, earnestly recommended to taste a fine haunch of Glynde mutton, to which His Grace, himself a breeder and admirer of Southdowns, and well acquainted with Mr. Ellman, readily acceded, but no politeness to his noble host could induce him to finish the slice, or to say it was otherwise than rank in flavour, and terribly tough!

“On inquiry, the disappointed Marquis ascertained that his shepherd, who had been ordered to kill the ‘best’ Southdown sheep, had actually slaughtered a ram for which Lord Sligo, a few weeks before, paid Mr. Ellman 200 guineas.”

It was not, however, always on the subject of mutton that

Ellman and Young corresponded, for in 1793 Ellman wrote to Young:—

"I am in the midst of lambing, with a prospect of a good fall, more than one-third of my ewes fling doubles. If the weather continues favourable I expect as large a crop as last year, plenty of feed, rye, rye-grass and clovers good, the season proving mild our turnips ran early to seed. I think I shall not be obliged to feed off my wheats this year, a practice very general here. I have seen crops much injured by it, but believe it may be right to put sheep on wheat in light soil for the purpose of closing the root and, when the plant is thin-set by feeding off on dry lands will give a better stock, but here it is done oftener through necessity than for improvement to the crop."

Two letters from Young touch on rather different subjects, the first entirely sporting, for he writes from Petworth, then the seat of Lord Egremont:—

"I wrote you a few days since and His Lordship has communicated to me your last letter to him. It gives me the highest pleasure to find that the subscription is likely to be adequate to the end it is intended to promote. In consequence of Lord Egremont having persuaded me to stay at Petworth in order to be present at the coursing party, I have stayed longer than I originally intended. I shall leave Petworth in a few days and shall certainly call at Glynde by the end of next week. We had most excellent coursing, Mr. Napper's bitch, Fidget, was again the victor. The Cup was adjudged to her. After which several matches were run and afforded a great degree of pleasure to many hundreds who were present. The whole was crowned by a great party dining here and making merry till a late hour.

"Between 50 and 60 sat down to dinner, amongst whom were Lord Howel, Lord Tyreconne, and Sir Frederick Evelyn." (Then follows a list of names including those of many clergy who apparently enjoyed the sport of coursing.)

Young ends up with a significant postscript:—"I was at Brighton Assembly last Monday, set off from Petworth about 12 o'clock, reached Brighton at 5 p.m. Went to the Ball at 8, to bed at 2, off again at 5 a.m., and breakfasted here (at Petworth) at 10!" It makes people wonder whether Young did the journey by coach or by hack across country, and if he adopted the latter mode whether his mount resembled the hack depicted by George Stubbs, R.A., in his picture dated 1793!

John Ellman exhibited his sheep and his Sussex Cattle freely, and so successful was he that few cared to compete against him, so small were their chances of success.

For instance, amongst other and greater successes in 1808 the Glynde shepherd Charles Pain won the Shepherd's Prize at

Lord Somerville's Spring Show for having raised 799 lambs from 600 ewes, only losing 21.

With Sussex cattle John Ellman was nearly as successful as with his sheep, for, according to Mr. Alfred Heasman's short account of the breed, Ellman was the leading spirit of the Sussex County Agricultural Society and his cattle were so successful that after a time he ceased to exhibit so that others might be in the running. So keen was he, however, to advertise the merits of the breed for draft as well as beef purposes that in 1797 he sent a pair of his best working oxen to the Duke of Bedford at Woburn Abbey.

The fact that John Ellman ceased to exhibit in order to allow others a chance of distinction is all in keeping with his sporting nature, for the "Druid" has left it on record that Ellman of Glynde loved a day with his lemon and white beagles, and that if a hare beat him at nightfall he would mark with a stick the spot where the beagles last spoke to her and return there first thing in the morning. Moreover, in the farm account books there are figures relating to the keeping of a pack of hounds.

Again, the writer had the good fortune, when visiting Glynde, to see an ancient MS. Book called "The Book of Wisdom," compiled by one William Wisdom of Glynde, in which facts concerning the village and its inhabitants had been entered. There it is placed on record that when John Ellman and his brother Richard came with their father from Hartfield to the great farm at Glynde, Richard was much the better hand at cricket, but when John began to take to the game, he learned to play it scientifically—that is, to guard his wicket by holding the bat upright, and by bowling what is called a "length ball." Being a powerful young man he bowled so hard that it required some skill to keep the ball off the wicket. He soon got to be much superior to his brother, and played very successfully for many years. John Ellman, Wisdom also tells us, played cricket, danced, sang, and was excellent company, always "liberal, merry, and wise," and he knew when was the proper time of life to drop such kind of amusements.

To return, however, to Ellman the farmer and the Public Man.

FURTHER CORRESPONDENCE.

As the years rolled by the Glynde sheep found their way all over Great Britain, to Scotland, to Northumberland, to the East and West Coasts, to Wales and to Ireland, while a Glynde ram even found its way to Russia, as a gift to the Emperor. Two of the purchasers were destined to make as great a name in the Southdown world as Coke of Norfolk, who had started his flock on Ellman blood; these were Jonas Webb of Babraham, who

afterwards attained wellnigh as great a position in the South-down world as John Ellman himself, and Mr. Boys of Betteshanger, Kent, whose daughter afterwards became Ellman's daughter-in-law.

Mr. Boys senior was a regular correspondent with John Ellman, and in a letter dated January 12, 1807, some interesting remarks are made regarding swedes; thus: "When your son was here he expressed a wish that I would save some Swedish turnip seed for you, I have accordingly planted out about $\frac{1}{2}$ acre. Henry selected them with great care in the manner you pointed out to him, and I had every turnip cut with a penknife to see that it was of the true yellow colour. I shall take care that there is no cabbage or turnip seed growing within a mile of the place so that you will have the seed as perfect as possible. I shall send you the seed and you may save some in the following year, in the same manner for me, but as I have none to sow this year, I must beg you will supply me with a bushel or two. The two pigs do very well, and I am much obliged to you for them, but the boar is still very lame.

"My own are so good a sort that I shall not give them up till I am convinced that yours are better, which as yet I very much doubt, but they shall have a fair trial. I have one now that will weigh about 60 stone and another little one very small boned about 50 stone. I had thoughts of taking one to Lord Somerville's meeting, but the weight and trouble will be so much that I do not think it will be worth while.

"The late excessive wet weather hurt my flocks much, but they are now doing very well. I expect soon to commence selling my wether tegs to the butchers, to-morrow-I begin to give them a small quantity each per day of oil cake on turnips on Malmaims Down, not with any view to profit from the cake because I am sure it will be lost, but to improve that extreme poor land and lengthen out my winter stock of provisions . . . our corn markets have been very dull for some time past. Wheat last week 84s. to 90s., barley 41s. to 42s. per quarter, Blue Prussian peas are worth from 90s. to 105s. Beef and mutton are a little better sale, the former at 13s. per score and the latter at 8d. per pound.

"Yours sincerely,
"(Signed) J. Boys."

Another chatty letter from the same writer in September, 1807, begins on a note of woe: "The gentlemen who talked of going to Burnham with me in a Sociable have all deserted me, and in consequence I did intend setting off this afternoon on horseback, but I have an inflammation in one of my legs and besides that am tormented with a bad Hop Drier whom I must

discharge, and, as this is a great concern I dare not leave home till I am settled with one that can be trusted. Henry has just gone out in pursuit of one. If you can buy me a good true Suffolk Punch mare not less than 3 or more than 7 years old, at a very moderate price, I shall be obliged to you. You can perhaps get her sent at my expense to Gravesend, where I will send a man to meet her.

"I shall say no more about rams till I see you here, only that I wish not to be beaten by any of my neighbours, which I certainly shall be without a little more of your assistance in the ram way. I have only one of all those bred from old number one that is fit for me to use, and only one of the tegs that can be called a good one, the one that was the smallest lamb of the six. Was he a twin? The ewes arrived safe, but I have had a misfortune with one of the best by losing the use of one hind-leg. Perhaps you will let me send a score of ewes down to your number seven? If so I will send them in a wagon and take a ram back—the price of course must be left to you.

"I have sold my wool for 10*d.* a pound ready money, this I did on the first shooting day (15th) and as it was an eventful one I will tell you what I did. I bagged 12 brace of all full-grown birds without going off the farm, on which I had no less than 13 coveys.

"I sold 12 N. Wales runts (all I had left of 26) which cost me on average £3 12*s.* 4*d.* last November and now average me £11 16*s.* This I call good grazing, considering they had but little hay last winter.

"Yours sincerely,
"(Signed) J. Boys."

By asking John Ellman to purchase a mare, Mr. Boys confirms the opinion freely expressed that the great flockmaster was as good a judge of horse-flesh as of sheep.

As we have remarked before, John Ellman was not only interested in agriculture and politics but in the welfare of the agricultural labourer, and he carried this interest into practical effect by his treatment of those he employed at Glynde.

A man who would not deny pleasure to others yet he felt keenly the increasing intemperance amongst the labourers, a sentiment that obviously urged him to write to the Duke of Richmond in 1830 thus: "Your Grace, I hope you will excuse the liberty I am taking in troubling you with a letter and the agitated state of the country is my apology.

"In times like these it behoves everyone to try to find out the cause of the disturbances in order to discover a remedy.

"I have doubts that there is considerable distress in most

parishes in the country in a great measure arising from the poverty of the farmers, and also from the improvidence of their labourers in mis-applying their energies for want of comfort by their own firesides, which they too often leave, when their daily labour is done and spend the evening in a public house or one of these pot-houses licensed under the Beer Bill, which are to be found in every village in the country and in many three or four.

"I have no doubt but ministers meant it as a boon to the country (the Repeal of the Beer Duty) and it would have done some good had people not been permitted to have drunk beer on the premises.

"I ever thought a public house a great nuisance in a country village, these pot-houses are worse, as they afford greater facility to the labouring class to associate together where they are not so likely to be seen as at the public houses.

"I cannot help thinking that ministers were imposed upon by the brewers who thought by getting rid of the Excise they might use any ingredients besides malt and hops, and it would lessen private brewing.

"Had the duty been taken off the malt it would have enabled every cottager to have brewed his own beer, and his family would have partaken of it; the yeast would have been useful for baking, and the grains would have assisted in bringing up a pig. The husband would have had no excuse for leaving his family, when he returned from his daily labour, and would have enjoyed his beer with his family by his own fireside.

"I am informed that Mr. Curtees has given notice of his intention to bring the malt duty before the House soon. If it were necessary the table might be overloaded with petitions for taking off the malt duty, but I think petitions only tend to perplex the House.

"I beg to thank Your Grace for your exertions last Sessions to prevent the beer being drunk on the premises in these licensed houses, and also for the very able part Your Grace has always taken in support of the agricultural interest.

"Yours &c.,

"(Signed) JOHN ELLMAN."

It was in 1829—when he was 77 years of age—that John Ellman decided to retire from farming, giving up the Glynde Farm to his son John, and going to reside in Lewes.

The flock was sold in that year (the auctioneers being Messrs. Verrall) with the following result:—

770 ewes from shearlings to aged ewes averaged £3 1s. 6d.

300 ewe lambs averaged £1 16s.

36 rams averaged £25.

241 wether lambs averaged £1 1s.

1 ram made 65 guineas.

Although not strictly belonging to the history of John Ellman senior, it may be of interest to give the result of the sales of the flocks belonging to John Ellman's two sons, and to his grandson.

John Ellman, junr., owned the Landport Flock which was dispersed in 1846 by Messrs. Verrall, when 280 shearling ewes averaged £2 10s. 5d.; 224 four-tooth ewes averaged £2 7s. 3d.; 190 six-tooth ewes averaged £2 7s. 8d.; 310 aged ewes averaged £2 2s. 6d.; and 350 ewe lambs averaged £2 6s. 2d.

The Beddingham Flock belonging to Thomas Ellman was sold in 1867 by Mr. Strafford, when 690 head (lambs, ewes, ram lambs, and rams) averaged £4 10s. 1d., one ram making £50, while a pen of 10 six-tooth ewes made £50.

Robert Harvey Ellman (son of John Ellman, junr.) sold his Landport Flock in 1876, Messrs. Southerden, Morris and Burtenshaw being the auctioneers, when the 980 head averaged £2 10s., top average £2 19s. 3d. for four-tooth ewes.

So great a man and breeder as John Ellman was certain to be appreciated by his fellow agriculturists, of whatever station of life. Thus in 1800, he was the recipient of a silver cup, presented to him by twenty-seven of the nobility and chief landowners in Sussex; this cup bore on one side a portrait of a two-year-old ram which had gained the prize at Lewes in 1798, and on the other names of the donors and this inscription:—

"The undersigned, truly grateful for the great advantages rendered to the sheep breeders on the South Downs by the exertions and the assiduity of Mr. John Ellman of Glynde, in making the merits of this valuable breed of sheep generally known and demanded, offer him this cup as a token of their esteem."

In 1805 John, Duke of Bedford, presented Mr. Ellman with a valuable silver vase, says Mr. Walesby in his Memoir, the inscription on it being:—

"To Mr. John Ellman of Glynde, in the County of Sussex—as a testimony of his meritorious and successful exertions in the improvement of a Breed of sheep possessing properties truly valuable to the interests of British husbandry and commerce, as the acknowledgment of his liberal assistance to individual efforts in pursuit of the same object, this Cup was presented by John, Duke of Bedford, 1805."

In 1819 the Board of Agriculture awarded John Ellman a Gold Medal for the "Best cultivated farm in Sussex," while of course he had won many Cups, Medals and Premiums for his sheep and cattle at Shows.

According to a writer in *Baxter's Library of Agriculture*:—

"When in 1829 after nearly 60 years' practice as an agriculturist John Ellman retired from business, he was followed into retirement by the praises of the rich, and the gratitude of the poor on whose behalf he had spoken several times as a witness before the House of Commons."

The occasion of his retirement was not allowed to go unnoticed, for a massive silver tureen, surmounted by a figure of a Southdown Sheep and bearing the names of 186 noblemen and gentlemen, the donors, was presented to John Ellman in August 1829. The tureen bears the following inscription:—

"To John Ellman of Glynde, Esquire, on his retiring from the Farm in which, for more than half a century, he has devoted himself to the interests of agriculture. As a token of their sincere regard, and a tribute to his great merit, especially in improving and extending throughout the British Empire the Breed of Southdown Sheep, and his much admired conduct to his labourers, this Piece of Plate is presented by a number of Agriculturists and Friends, and to his Family, a Portrait of Himself."

John Ellman died three years after retiring, passing away at his house, at Lewes, on November 22, 1832, and was buried in the family vault in Glynde churchyard where his two wives lay.

The inscription on the tomb is as follows:—

"In the vault below rest the remains of the late John Ellman, Esq., Deputy-Lieutenant and in the Commission of the Peace for this County.

"By him the Breed of Southdown Sheep was first improved, and, through his exertions spread over the whole Kingdom.

"A great portion of his life was spent in rendering practical assistance to Public Improvements, at the same time he did not forget to promote the welfare and happiness of this Parish in which he resided for more than 60 years.

"He died 22nd November, 1832, in the 80th year of his age."

E. WALFORD LLOYD.

The Haven,
Tennyson Road,
Bognor.

FARMING IN YORKSHIRE.

THE County of Yorkshire—the county of broad acres as it is sometimes termed—and the largest county in England, contains within its boundaries 3,869,000 acres. When it is realised that the county is so extensive it must be apparent that in the compass of this brief article little more than a bird's-eye view of its agriculture can be given. Yorkshire is divided into three Ridings, which, in order of size, are the West, the North, and the East Ridings.

Robert Brown, who surveyed the West Riding at the end of

the eighteenth century, says: "Without all dispute it is the most important of the three. It contains not only a large quantity of valuable ground, well adapted to the different purposes of husbandry, but also in its bounds are carried on large and extensive manufactures. In a word, whether it is considered with respect to magnitude, fertility of soil, local advantages, manufactures, or population, it will be found deserving of the most minute attention, and worthy to be ranked with any province in the Kingdom." What Brown says of the Riding, writing in 1799, might conceivably have been written in 1928, except that, it might be noted to-day, industry has overshadowed agriculture to a large extent in the South Midlands of the Riding.

The North Riding has its important iron and steel works in the vicinity of Stockton, Middlesbrough, Loftus, etc., now happily recovering to some extent from serious trade depression, and its more recently introduced industry—the Synthetic Ammonia and Nitrates factory of Imperial Chemical Industries—an undertaking which, situated at Billingham, near Stockton-on-Tees, seems to be gradually extending and becoming more important. These industries occupy a relatively smaller part of the Riding, where the chief pursuit of the people is agriculture, than in the West Riding.

The East Riding might be termed the Riding where agriculture is almost the only industry. In this Riding is situated the important seaport of Kingston-upon-Hull, more frequently referred to as Hull, which is the third port in the Kingdom, an important city to the farmer because of its seed crushing and cake manufacture. Hull and Selby supply a large proportion of Yorkshire's requirements in the form of cakes and meals, but large quantities come from Liverpool, especially to the West Riding. A journey across the Wolds cannot fail to impress even the casual observer that agriculture, and agriculture only, holds sway. For miles, as one travels from Bridlington to the top of Garrowby Hill, one passes through a purely agricultural area, and at the same time one cannot help feeling impressed by the importance of agriculture in this county—or in the country—by such a journey.

A very brief description of the Geology of the soils resulting from the different geological formations may convey some impression of the selection of soils, and at the same time afford some explanation of the differences in the farming systems which prevail in different parts of the county.

THE MOUNTAIN LIMESTONE.

A study of the Geological (solid) map shows that the more important formations run approximately north and south. Starting with the older formations and proceeding from west

to east we find the Mountain Limestone. This formation covering an extensive area in the West and North Ridings, runs up to a fairly high altitude, and gives rise to rather thin soils on the higher ground, but to deeper soils, as a result of denudation and accumulation, in the valleys. Almost all this area is under permanent grass. The pastures are not very productive, but what is lacking in quantity is to some extent at least made up by quality. While this general statement holds good, it is not meant to indicate that highly productive grassland does not exist. Milburn writing in this *Journal* in 1848 refers to grassland on the Mountain Limestone "so valuable as to let for as much as £4 per acre in that isolated district where the only profit is to be made by ordinary farming." It is questionable whether much of it fetches a higher rent to-day than it did in the middle of last century.

Hay produced in some of the Limestone dales is sometimes referred to as "herby," no doubt getting this name from its components. Such hay, especially in a district with a fairly high rainfall as this has, is difficult to cure, but it has a high reputation amongst stock owners for feeding value; it also has a mildly laxative effect on cattle, a point in its favour when so many stock may have to depend almost entirely upon this hay to carry them through the winter. In the Craven district there are many outlying barns and shippens with haylofts in the top part and cow-stalls on the ground level where cattle are wintered. Such an arrangement obviates the necessity of carting hay home to the main block of farm buildings and of carting back farmyard manure to distant meadows. The rearing of stock is an important feature of this area, dales cattle and sheep being held in high repute as good doers, and for them there is usually a keen demand from other parts of the county.

THE MILLSTONE GRIT.

This formation covers a wide area, most of which is situated in the West Riding, but it also extends into the North Riding. A narrow strip of it separates the Yorkshire from the Lancashire coalfields. The soils derived from the Millstone Grit might be described generally as poor. Some very thin light hungry soils occur, but deeper and heavier bodied soils are to be found. There is on this formation a large area of heather-clad moorland, and all the soils derived from the Millstone Grit are inherently short of lime. Unless carefully managed, and liberally treated, both arable and grassland have a low level of productivity. Much of this area, so far as that situated in the West Riding is concerned, suffers from smoke damage, and this circumstance affects soil conditions and necessitates even more frequent liming on a soil inherently deficient of this important constituent.

THE COAL MEASURES.

This formation is confined to the West Riding where it covers a wide area (approximately 30 miles from north to south, and 15 to 20 miles in breadth). In this area, as already indicated, agriculture takes second place. The soils vary considerably from very heavy intractable clays to light almost blow-away sands. The clays, derived from the Coal Measures shales, are difficult to cultivate not only because of the high clay content, but also because of the association of clay with a high fine silt content, and are mostly under grass. There is, however a fairly large part of the area covered by an intermediate type of soil which might be described as a free working loam, but in the same field one may find the medium loam and the rather intractable clay soils represented, and such a set of circumstances from a cultural point of view gives a rather unhappy combination. On account of subsidence, due to mining operations, various drainage problems occur, and quite extensive areas have in consequence become water-logged and gone out of cultivation. There is a risk that still larger stretches of the county may in future years be seriously affected by subsidence. To quote from the Report of the Special Commission on Mining and Drainage in an area around the County Borough of Doncaster: "In the Doncaster area, however, where large stretches of country are below or little above the 25-foot contour, the effect of subsidence would be very considerable. It is, therefore, quite intelligible that the prospects of the development of coal mines under the Doncaster area should have aroused some apprehension and alarm. It was felt that unless adequate measures were taken very large tracts of land would be in danger not only of losing their agricultural value through water-logging, but of being submerged, and that the same fate might befall roads, villages, and farm buildings"; and later: "The natural result of the extraction of coal will be to lower the surface of the land and thus to aggravate the difficulties of drainage." To students of drainage problems this is a most interesting area. The Romans, according to some historians, cut the Bycarrs Dyke, which runs into the Trent. Later the Dutchman, Cornelius Vermuyden, early in the seventeenth century carried out extensive and important drainage operations in Hatfield Chase. These operations by Vermuyden cost up to 1626 the sum of £58,828, but the total cost including, in addition to drainage, such items as compensation, enclosing and allotting, amounted to £200,000. About the middle of the following century the famous engineer, John Smeaton, was called in to report, and later, several other drainage authorities, including Fester, Stone, Thackray, and Rennie.

The Coal Measures soils as a whole might be termed hungry

but responsive. As with the Millstone Grit soils, so with those of the neighbouring formation, periodic liming is a necessity if the land is to be maintained in fertile condition. On account of the acid material which is continually, in greater or lesser amounts, being deposited on the surface of the soil from the smoke-polluted atmosphere of the industrial areas, added to the fact that the Coal Measures soils are inherently short of lime, the need for periodic liming in this area, if the fertility of the soil is to be maintained, becomes apparent.

Wheat, oats, and potatoes are perhaps the most satisfactory arable crops, but with care good pastures and meadows may be maintained. The failure of crops—roots, barley and seeds particularly—and the frequent occurrence of damage to swedes and turnips by finger-and-toe, is to be regretted when such failures are frequently traceable to shortage of lime in the soil, and therefore preventable.

THE MAGNESIAN LIMESTONE. •

The Magnesian Limestone occupies a relatively narrow strip running along the eastern boundary of the Coal Measures in the south, and further north, of the Millstone Grit, and gives rise to soils which vary from thin brashy soils to much heavier soils of greater depth. The thin soils are mostly worked on the 4 or 5 course system—sheep and barley land—but on the deeper soils potatoes are an important crop. It might be described as moderate cropping land more noted for the quality of the produce, *e.g.* potatoes and barley, than for yield. Part of this area too has, owing to the spread of industry, suffered from smoke damage, and districts which formerly grew many acres of barley annually have now almost ceased to grow the crop. It would seem, although there may be other causes, that industry, with its accompaniment, a smoky atmosphere, and therefore the impossibility of producing bright samples of grain, has compelled farmers on the southern portion of the area to cease growing barley. Industrialisation of part of the area—the coal underlying the limestone—would seem to account for the reduction of the sheep population in the southern part of the area. Much of this formation, especially in the North Riding, is masked by drift.

VALE OF YORK.

A large area covering part of the three Ridings. It would be a misnomer to refer to the Vale of York as a Geological formation—it is complex geologically, and more complex perhaps from a soil point of view. Heavy clays and all gradations between heavy clays and blowing sands, are represented in this wide area; in fact, one may find cases where three or more soils of very different texture are to be found in one relatively small

field. It need hardly be mentioned that such a set of conditions, which unfortunately are not uncommon, is anything but a happy one from the point of view of practical farming. The sands in some areas, e.g., Sutton-on-Forest, Strensall, and near Thirsk, overlies clay which would appear to be of lacustrine origin. Reference is made in earlier writings to the improvement effected by the application of large quantities—400 to 500 loads per acre—of the clay to the soil.—According to Milburn,¹ “the effect has been astonishing and the land is now capable of growing good crops of wheat.” The writer has been informed by one farmer that the latter’s grandfather had “clayed” almost all the farm, and evidence of clay pits are still extant. The land is flat and frequently underdrained at considerable depth, but drought seldom affects crops on this sand.

In the vicinity of Selby, on much of the light sand land the water table is high. If this were not so it is highly probable that many acres of this land would be a barren waste.

Before proceeding further eastward through the county it is well to note the extensive area, mostly in the West Riding, covered by Warp Soils. Some are natural, some artificial. Some are light, whilst others are of fairly heavy texture. The area so covered is noted for two crops, potatoes and peas, and good yields of both are common. This is perhaps the only area in Yorkshire where the land is cultivated by steam and motor cable sets. In some instances ploughing of stubble in autumn to a depth of 15 in. or more is given in preparation for the next year’s potato crop, the autumn cultivation of one field proceeding simultaneously perhaps with the harvesting of the crop in an adjoining field. Some of the light soils—frequently referred to as Rye and Potato Land—suffer from shortage of lime, and in their sour condition the choice of crops which will grow satisfactorily becomes limited, and liming has to be carried out with care or damage may be done to the very important potato crop, it being found that lime in excess indirectly encourages ordinary or brown potato scab (*Actinomyces*). The interesting, though costly, process of warping is not obsolete, quite large areas have been warped within recent years.

THE CHALK.

This formation is represented only in the East Riding, and gives rise to the area commonly referred to as the Yorkshire Wolds—the area noted in the county for the largest arable farms, high quality malting barley, and its sheep. The soils vary from thin chalky soils of 4 in. to 5 in. in depth, to decidedly deeper soils. They are worked mainly on the Norfolk four-course

¹ “On the Farming of the North Riding of Yorkshire,” *R.A.S.E. Journal*, Volume 9.

rotation, or the extended five-course rotation with two corn crops following seeds. Seeds are grazed as a general rule, and most farms have only a disproportionately small acreage of grassland. Within recent years, however, due in no small measure to the unsatisfactory price of cereal crops, the sowing down of land to two year or longer leys, and also to permanent grass, has been noted.

In the vicinity of Bridlington and running along the coast and bending inland for a few miles, there is an extensive area where Boulder Clay overlies the Chalk.

The Chalk soils of Yorkshire differ from the soils of similar origin in the southern counties in that generally they contain less flints. There is still evidence of the old chalk pits which were in use during the first half of last century. Wold soils in those days responded to the application of chalk. Before its application Spurrey (*Spergula arvensis*) known in that area as "Perry" and in other parts of the country variously as Dother, Land Iron, and Lousy or Louse Grass, etc., was a troublesome weed, and Finger-and-Toe (*Plasmodiophora brassicæ*) or "Fingers-and-Toes" as it was then called, was a common disease on turnips; according to Legard¹ "in both these cases chalking has been found completely efficacious; from 80 to 100 cubic yards per acre are laid on," etc. As in those days, so again to-day, finger-and-toe is becoming rather prevalent, and it would seem that the reserve built up by bygone generations is becoming exhausted, and that chalking or liming may have to be more widely practised once again on the Wolds of Yorkshire.

The lengthening of the rotation by the introduction of two to four year leys tried by some farmers during the recent years of depression with the view of reducing labour costs, and thus making the farm more profitable, may go so far towards the control of the disease, but such a variation where the disease has got a hold may prove to be only partially successful.

On account of the relatively low prices obtainable during recent years for cereals—barley particularly—beef, and mutton, and at the same time the high prices of concentrated feeding stuffs, this area of Yorkshire has perhaps felt the depression more severely than the other Ridings, or even than the rest of the East Riding.

Formerly, and to a certain extent nowadays, the farming on the wolds might be termed farming for the land; sheep, fed to give a profit if possible, might be said to be kept mainly with a view to consuming the seeds in summer and the roots in winter, both crops being consumed on the land. The land is thus enriched for the succeeding corn crops—wheat after seeds and barley after roots. The bullocks—bought in as a rule in autumn

¹ "Farming of the East Riding of Yorkshire," by George Legard, *R.A.S.E. Journal*, Volume 9.

—are fed on turnips, straw, and purchased concentrates. They are kept to convert the straw and roots into manure which will then go back to the arable land, and often it has been said, and unfortunately for the farmer the statement has been only too true, that the farmer's profit from the feeding of the bullocks lay in the manure only.

There are many square miles of the East Riding where the chalk is covered over by Boulder Clay, as for instance that area of the county situate between Bridlington and Driffeld, and a narrow strip running along the coast. In Holderness there is a wide area of strong land—wheat and bean land—where bare fallowing is still a common practice. Also in southern Holderness there is the only arable area of any importance of Carr or Peaty land in Yorkshire. Holderness too has some rich pasture land reputed to be more suitable for mature than for younger cattle.

Leaving out of consideration the western dales of North Yorkshire where the soils are chiefly derived from the Mountain Limestone and Millstone Grit, it might be said that the soil of that large area north of the Cleveland hills, and extending to the sea on the east and approaching the dales in the west, and north towards the river Tees, is largely derived from glacial drift. There is a covering of drift in the northern part of the Vale of York which extends into the North Riding.

The Lias, the Magnesian Limestone, and Keuper and the Bunter, are almost entirely masked by drift in the form of Boulder Clay or Glacial Sands and Gravels. The ordinary farm crops—wheat, oats, barley, beans, potatoes, and seeds—are represented, and there seems to be a greater tendency to extend the rotation by the inclusion of longer leys here than in other parts of Yorkshire.

In the North Riding there is an extensive area of strong land—in some cases not too well drained—and bare fallowing is still a common practice. On strong land near Northallerton the growing of winter-sown soiling mixtures in place of the usual bare fallow was followed by good results. As compared with the bare fallowed portion, the number of ploughings reduced from 6 to 2, a good crop of soilage was obtained, and the succeeding wheat crop was better on the area following the soiling crop than on that which followed the bare fallow. The heavy soiling crop apparently not only checked weeds, but left the land in a good state of fertility for the following crop. At the same time there is some very light land, as in the vicinity of Raskelf, Pilmoor and Thirsk, where rye, oats, potatoes, and carrots are the chief crops, and on those well-managed sands where lime has been applied, sugar beet and barley have been found to yield well, and heavy crops of seeds hay are obtained.

Some good fattening pastures are found in the dales, in Ryedale for example, which runs down to the Vale of Pickering; but there is an extensive area of heather clay moorland in the area known as the Cleveland hills. The Valley of the Tees is a rich agricultural tract.

SPECIAL FEATURES OF THE AGRICULTURE OF YORKSHIRE.

A glance at the Agricultural Statistics for Yorkshire at once reveals the importance of the county as a grain-growing area. The cultivation of these crops in the county differs little from that obtaining in other parts of England, hence a description of their cultivation and management is omitted. Similar remarks apply to the root crops, but so far as swedes and mangolds are concerned, it might be mentioned that sowing on the ridge would seem to be less common than sowing on the flat. There are some systems of farming and certain crops which occupy an area relatively large to the total area occupied by these crops, and these are now referred to in some detail.

WEST RIDING.

In the West Riding there are some systems of farming which though perhaps not peculiar to Yorkshire are yet deserving of mention on account of their importance in the Riding.

The milk and feed system of dairy farming is common, especially in the industrial area. This system consists of purchasing newly calved cows and carrying them through one, but seldom more than two, lactation periods, at the end of which, as the cows are fed liberally on concentrated foods, they are fat and are sold for slaughter. The production of milk is the chief object in view, and no doubt good yields are obtained by the system. Many of the farms on which this system obtains are entirely under grass, but on some a small area is regularly under arable crops.

Where the whole farm is under grass, all the land, both pastures and meadows, may receive an application of farmyard manure (which consists almost entirely of the faeces, since little bedding is used) each year, or the meadows receive farmyard manure each year, and the pastures an application in alternate years. The question may be asked how is it possible to produce so much farmyard manure? This is explained by the fact that the stocking per acre is high, not infrequently at the rate of 1 cow per acre, and this heavy stocking necessitates the purchase of large quantities of food which may consist chiefly of wet grains and concentrated foods, but may also include hay and roots. The land may be incapable of supplying even the maintenance part of the ration throughout the year, and on account of the

large quantity of foods purchased the dung heap may assume relatively large proportions. Many farms are managed in this way.

Where a portion of the farm is under arable cultivation the arable land is frequently worked on a three-year rotation, viz., roots (mainly swedes, but some mangolds and potatoes are grown), oats or wheat (the latter after mangolds and potatoes), oats.

If satisfactory crops of swedes free from finger-and-toe are to be obtained by this rotation the reserve of lime in the soil must be maintained by periodic liming. On the other hand, on some farms the arable land may be worked on this system for a period, and then it may be sown down to a long ley of three to six years' duration, and one of the older leys may be broken up to replace that sown down.

Cows are purchased—Otley, Skipton, and Hellifield are important markets in this connection—as second calvers, or as newly calved second-calf cows. During their last lactation the cows are liberally fed, well above the recognised standards for maintenance and milk production, so that when dry they are ready for the butcher. Although a satisfactory yield of milk is obtained it seems a pity that the system involves the loss of many good cows at such an early age. It seems probable too that better economic results might follow more careful rationing of the cows.

Grassland so treated gives good yields of hay, but it tends to be rather coarse and lacking in quality. Some of the more progressive farmers, within recent years at least, have applied lime and phosphates to the land, and the results appear to have justified the expenditure, a marked improvement in the herbage being noted, and as a result better quality hay and grazing have been produced.

This system of management of dairy cows may also be found on farms with a larger proportion of arable land, and on such farms potatoes and wheat assume relatively important positions. Writing in 1848 Charnock¹ observed: "Most of the arable land is, as I have said, cropped irrespective of system: potatoes, wheat, clover, potatoes, wheat or cabbages, is a common course. And again white crops in succession, with a green one every third or fourth year is not uncommon." To a large extent his remarks apply to the present time. Much of the land is worked on no very definite rotation, but no instance is known to the writer of continuous wheat growing as was mentioned elsewhere by Charnock.

What may be termed rhubarb farming occupies a prominent

¹ "On the Farming of the West Riding of Yorkshire," by John H. Charnock, *R.A.S.E. Journal*, Vol. 9, 1848.

place in the husbandry of the Leeds-Wakefield area. According to the Agricultural Statistics of the Ministry of Agriculture and Fisheries for 1927, of the 6,616 acres of rhubarb in England, there were 2,888 acres in Yorkshire, and, of these, 2,822 acres in the West Riding. The production of forced rhubarb is the chief object on many small farms in the area referred to, but it may be combined with market gardening and milk production. The soil and climatic conditions of this area seem to be eminently suited to the successful growth of rhubarb. Some green rhubarb may be sold, but as far as possible energy is concentrated on the production of forced rhubarb, which is marketed from Christmas to about the end of April. During the season large quantities of it are sent daily to Covent Garden. It is grown in special forcing sheds, long, low, dark buildings, specially constructed for the purpose, into which the roots after having been growing in the fields for two or three years without any rhubarb having been pulled, are taken in the autumn. The roots are placed close together and the intervening spaces filled up with soil. They are watered regularly, and arrangements are made whereby the sheds are artificially heated by pipes from a furnace. Great care is necessary in the pulling of the stalks so that the "eyes" are not damaged, otherwise the yield may be reduced, and also in the cutting of the roots when they are removed from the sheds before they are replanted out-of-doors. Prince Albert is the early variety, and Dawes Champion and Victoria the late varieties favoured in Yorkshire.

Large quantities of farmyard manure are required by the rhubarb growers—formerly little difficulty was experienced in getting supplies from stables in Leeds and other towns, but the ousting of the horse by motor transport has in recent years made it more difficult for the growers to obtain supplies. Some of the farmers on the milk and feed system might find it a more profitable proposition to sell some of their farmyard manure and to expend some or all the income therefrom on lime and phosphatic manures, to the mutual advantage of the rhubarb growers and themselves, but the transport of the manure might present some difficulty as little bedding is used in many of the cowsheds in the area.

Peas for pulling when green occupy a fairly important position. There were close on 6,000 acres under this crop in the West Riding in 1927. In acreage, Yorkshire comes second to Essex amongst English counties with regard to pea growing. This crop tends to be rather speculative, and much depends upon the time at which it is ready for market. In some seasons the earlies leave a good profit, while the lates may only barely pay, while in other seasons the converse holds good. Peas frequently follow potatoes and precede wheat in the rotation, especially

where early peas are grown, as they may be got off the land in sufficient time to allow of a bastard or "pin" fallow before the wheat is sown. In a season like 1928 some excellent pea straw has been harvested. Some farmers feed it to bullocks, but others reserve it for hogs when they are on roots. When well harvested it makes valuable fodder, approximating closely to seeds hay.

Thomas Laxton, Alderman, and Standard, appear to be the chief varieties grown—the first being an early and the other two late varieties. In Yorkshire the distribution of the pea crop would seem to be more dependent upon labour supply than suitable soil conditions. They are grown on the Magnesian Limestone, the sands, and the warp—sometimes quite successfully on Warp soils which some might consider too heavy for peas—but as a rule in an area where casual labour is easily procurable both for hoeing and pulling. The buyer may, however, purchase the crop as it stands, the farmer only undertaking to cart the crop to the station.

On the sand land near Selby, and that large area bordering on the Ouse, Don, and Humber, where the Warp soils prevail, potatoes are still, as they were a century ago, the most important crop. Other crops are grown successfully, but it might be said that the energy of many farmers in this area is directed to potato growing. In most seasons good yields are obtained on these soils, but in seasons when the rainfall is above average the crop as a rule is much lighter. In spite of the fact that growth was retarded to some extent by the relatively cold weather which prevailed in June of this year (1928), the more genial growing weather from July to October encouraged growth and some very good crops have been raised this autumn (1928), crops well above average in yield not being difficult to find. Much of the crop is marketed in the industrial areas of Lancashire and Yorkshire and there is a keen demand from these areas for large tubers, which are preferred by the chipping trade. Majestic and King Edward are two of the most important varieties in this area to-day, the former, if anything, gradually occupying a larger, and the latter a smaller area as the years pass. Great Scot, however, still occupies a fairly large area, and Red King and Mons Star have recently replaced King Edward to a certain extent. Potato disease (*Phytophthora infestans*), commonly referred to in Yorkshire as "demic," caused considerable damage in 1926 and 1927, but seems to have appeared to only a very slight extent in 1928. Over a long period it does not seem to be a serious pest in Yorkshire.

EAST RIDING

As already indicated, on the large area of this Riding commonly referred to as the Wolds, the four- or five-course rotations are nor-

mally practised, viz., roots, barley, clover, wheat; or roots, barley, clover, wheat, oats or barley. The cultivation for the roots resembles that in other parts of the country, but the general practice is to sow on the flat by means of a drill which has two spouts to each row, one spout for artificial manures, and the other for the seed. As a rule artificial manures only are supplied for this crop, and while there is something to be said in favour of a drill which applies the manure and sows the seed simultaneously, some care has to be exercised in the selection of the manure mixtures and the quantity applied. Cases have been noted where apparently over-concentration of manures in the immediate vicinity of the plant has led to at least a partial failure of the crop, and to the production of fanged roots.

As most of the roots are consumed on the land, no manuring is required for the barley crop where it comes after roots in the four-course rotation. Unfortunately the eating-on of the roots may be continued late into the spring, even as late as May. It is possible that where this happens there may be a serious reduction in monetary returns, as not only may the sheep become too heavy and the carcasses too fat for modern requirements and a less price result, but also the sowing of the barley and seeds may be delayed. The seed may be deposited in an indifferent tilth, as no frost mould has been obtained, and both crops may suffer to some extent.

The seeds are usually grazed and then in the months of September and October farmyard manure is applied in preparation for the wheat crop. To some it may appear rather wasteful to apply farmyard manure to seeds land whereon the crop has been grazed, but with the lighter wold soils it is apparently necessary to do so in order to ensure a good crop of wheat. Ploughing followed by pressing and drilling, the latter two operations being carried out simultaneously by the combined press drill, followed by harrowing, complete the autumn cultivation for the wheat, and it is indeed a fine sight to see a field being sown. Frequently one can witness three pairs of horses ploughing, followed by a pair with the press drill and another pair harrowing, and the whole process leaves the impression of well-organised work.

Where the rotation is extended to a five-course, the second straw crop, whether it be barley or oats, will normally receive a complete mixture of artificials.

Without doubt the farmers in this area have felt the recent depression acutely. The price of corn, relative to the cost of labour, has been low. Bullock fattening has left little profit. The poor root crop of 1927 meant that fewer sheep could be wintered. The question immediately arises, can anything be done to make the farming in the Wolds more remunerative, or are we

to see some land go out of cultivation? It is possible that the sowing down of some of the land to long leys or permanent grass might lead to better results. Some light Wold land has within recent years been laid away to permanent grass, and a gradually increasing acreage sown down to a long ley, but careful composition of seeds mixtures, and judicious manuring, are necessary if good results are to be obtained. Cases where satisfactory seeds takes have been obtained are known to the writer who, in discussing the above suggestion, is not unmindful of difficulties such as water supply and fences—difficulties which would not appear to be insuperable—which present themselves in this part of the county.

Ewes might be not only better wintered, where they could have a good run on grass, but more cheaply wintered than when, as at present, they are commonly folded on roots; also this system might lead to a great reduction in the mortality amongst ewes, which always tends to be greater where there is a good root crop, and which in some seasons is really serious. If such a system were adopted the breeds of sheep at present favoured—the Leicesters and Lincolns—might have to give place to other breeds, as has already been discovered where the long ley system has been tried and found profitable. In addition, if the results of recent experiments on the winter feeding of sheep on roots conducted at the Manor Farm, Garforth—formerly the Experimental farm of Leeds University and the Yorkshire Council for Agricultural Education—are corroborated, the period of fattening may be shortened, and a greater number of sheep fed per acre on roots, with possibly a greater financial gain to the farmer. Changes in practice may be necessitated by altered conditions, and the unsatisfactory balance sheets of many farms in recent years have pointed to the necessity for serious modifications of the present system if wages and corn prices are to remain at their present levels. It must be remembered that many Wold farmers are situated far from railway stations. Motor transport, however, has been introduced to a considerable extent, but if great care is not exercised in the organisation of the farm this may lead to higher rather than lower costs of production, presuming that carting formerly done by farm horses is now done by hired transport, and at the same time the number of horses maintained, with as a result fewer working days per horse. To some this may appear mere theoretical reasoning, but it is put forward with the hope that by some at least it may receive serious consideration. The adoption of such a system will necessitate to a considerable extent a redistribution of the farm capital. Unfortunately it may even require more capital on account of the larger head of sheep, but the labour bill, and also the annual expenditure on manures, should be considerably reduced, and to some extent

there would most likely be some reduction in expenditure on concentrated feeding stuffs.

Potatoes occupy nearly 15,000 acres in the Riding. They are grown chiefly in the Vale of York on the lighter Glacial soils and on the Warp. Beans cover an area approximately half that cropped with potatoes—they are grown chiefly in Holderness. The Pocklington district, where there is an extensive area of deep sandy soils, is famed for its carrots, a crop which might be compared with the peas pulled green, in that it is rather speculative.

Over 1,000 acres of carrots are grown annually in the East Riding, and about 200 acres in the rest of the county. The carrots are usually washed before dispatch from the farms. The crop is an expensive one to grow, as much man labour is required in connection with the weeding, singling, lifting, and washing of the crop. Nevertheless, while no doubt it is a speculative crop, over a long period it might be classed as a highly remunerative one. The farmer who maintains a uniform acreage annually is more likely to succeed than the spasmodic carrot grower, who, tempted by the high prices of one season greatly increases his acreage the following year, as sometimes has happened within recent years, only to find that prices have slumped and little profit was to be made from the crop. With both carrots and green peas much depends on the amount sent into the various markets daily throughout the season. Should a large supply arrive prices may fall in that market, while temporary shortage in another market may lead to high prices. Two similar lots at different markets may, therefore, make very different prices on the same day, and it requires fine judgment, perhaps accompanied by a little bit of luck, to market to the best advantage.

As in Northern Ireland, so in Yorkshire, the flax area has been considerably reduced during recent years, until in 1926 only one acre was grown in Yorkshire. The reduction in acreage is traceable to several factors, amongst which are foreign competition and change of fashion, but in the last two years flax has been reintroduced, and is to be manufactured in the Selby district. No doubt this venture will be followed with interest, and, if the farmer finds flax-growing under present conditions profitable, it is likely that the acreage may be considerably extended, especially on account of the low prices now ruling for potatoes and grain.

With the large industrial area and its dense population it is only to be expected that, as is the case, the numbers of pigs and poultry in the county would be large. Of the English counties Yorkshire comes second to Lancashire in the number of poultry. There is a good market for eggs, poultry and pork.

AGRICULTURAL TENANCIES.

A number of farms are occupied by the owners. Since the war the breaking up of estates led to the purchase by many farmers of the holdings they occupied. Some farms are held on lease, but most of the leases are of short (seldom more than five or seven years') duration. The majority of the farms are held on a yearly tenancy, and Lady Day tenancies with pre-entry at Candlemas or earlier, are common.

AGRICULTURAL LABOUR.

While the number of workers employed has within the last decade been considerably reduced, there were still nearly 61,000 workers employed on holdings over 1 acre in extent at June 4, 1927. The supply of regular workers has within recent years been sufficient to satisfy the demand in most districts. Much casual labour is required in certain districts for potato planting and lifting, the carrot crop, the pea crop, and while quite a lot of the casual labour is supplied from the local villages, especially in connection with peas and carrots, many Irish labourers are annually employed in connection with the hay and corn harvests and the lifting of the potato crop. Reference to the Agricultural Statistics will show too that in Yorkshire a relatively large proportion of women and girls are still employed in agriculture.

Since the Great War the establishment of a Bacon Factory at Sherburn-in-Elmet and of two Sugar Beet Factories, one at Poppleton, near York, and the other at Selby, is to be noted. It is too early yet to say much about these, but there would seem to be the possibility of producing sufficient raw material for both the Bacon Factory and the Sugar Beet Factories in the county. The Bacon Factory may be of educational as well as of pecuniary advantage in the county, but with the large demand for light pork from the industrial areas there would still seem to be a tendency to market as pork rather than to continue feeding until useful bacon weights were attained.

AGRICULTURAL EDUCATION.

A description of the Agriculture of Yorkshire would be incomplete without some reference to the provision made for agricultural education.

The provision of technical instruction in agriculture was one of the original objects of the founders of the Yorkshire College in 1874 (the College became the University of Leeds in 1904). It was not, however, till 1891 that it was found possible to establish at the College a Department of Agriculture. With the help of the County Councils of the three Ridings, who contributed for this purpose part of the "whiskey" money, together with the liberal donations of a number of public-spirited farmers and land-owners in Yorkshire, it then became possible to provide both

regular courses in agriculture for students at the college, and lectures and advisory work in the county.

Since those early days progress has been steady, and notwithstanding the growth of agricultural education throughout the country and the various incidental changes in its administration during the past forty years, the organisation in Yorkshire has remained essentially the same. For the purposes of agricultural education the county remains a single administrative unit. The administration is in the hands of a joint educational body known as the Yorkshire Council for Agricultural Education, on which are represented the County Councils of the three Ridings of Yorkshire, the University of Leeds, and the Ministry of Agriculture. The work is organised and carried out on behalf of the Agricultural Council by the University Department of Agriculture. It might also be mentioned that Yorkshire is recognised by the Ministry of Agriculture, under its scheme for the provision of technical advice for farmers, as a single Province and the University of Leeds as the provincial advisory centre.

At the University students can study for the Degree of Bachelor of Science in Agriculture, or for Honours Degrees in Agriculture, Agricultural Botany, Agricultural Chemistry, Agricultural Economics, and Agricultural Zoology, and for the University Diploma in Agriculture. Extension work in the county is by means of lectures on the subjects of Agriculture, Dairy Husbandry, Veterinary Hygiene, Horticulture, Poultry Husbandry, and Beekeeping. Extended courses in Agriculture and Horticulture are given at selected centres. With the co-operation of farmers, experimental and demonstration plots, both on arable and grassland, are laid down from time to time.

In 1898 the Manor Farm, Garforth, was taken on a thirty years' lease, which expired in April, 1928. For the past thirty years the farm has been used as a centre for demonstration and experimental work both for students at the University and to farmers. The Agricultural Council has recently purchased a property at Askham Bryan, near York, on which it is their intention to continue this side of the work. Fruit-growing in the county is promoted by means of the Fruit Demonstration Centre and the Fruit Testing Station at Osgodby near Selby. Soiling for Milk Production is being demonstrated at the Rawcliffe Soiling Demonstration Farm.

The Department maintains close contact with farmers throughout the county by means of six District Lecturers who are stationed at different centres, and organise the educational work in the surrounding districts.

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G. C. A. ROBERTSON.

THE LIVE STOCK OF YORKSHIRE

WHEN in the familiar phrase "Yorkshire's broad acres" we recognise Yorkshire's leading position among the counties in respect of size, we are not perhaps so generally aware that her acres account for 10 per cent. of the total area of England and Wales. A little further study of the statistics at our disposal—not to trouble the reader with uninviting tables of figures—shows that the same approximation holds for the live stock and the classes of live stock and for total agricultural output; broadly considered, Yorkshire stands for one-tenth of British Agriculture. It follows, therefore, that if an attempt were made to describe inside the limits of this article all the breeds of stock within the county it would come at best not far short of a description of the flocks and herds of England, since only a small minority of the pure breeds are unrepresented; at something less than best it would be an interminable and incomplete catalogue. I propose rather to deal almost exclusively with the commercial stock, the stock in which the vast majority of the farmers have invested their capital and on which they depend for a livelihood in whole or in part; to limit consideration of pedigreed breeds to a description of those that are native to the county and note the influence of pedigreed animals as it appears among the ordinary farm stock.

For this purpose it will be convenient to think of the county in terms of four areas presenting distinct characteristics to the observer. Yorkshire as a whole is the northern continuation of the great central plain of England broken into by three areas of greater elevation—the Pennines on the west, the Cleveland hills and North Yorkshire moors of the north-east, and the wolds of the east. The rest, greatest in extent as in agricultural importance, is grouped together under the name "The Vale of York" and considered last because as a grand stretch of mixed farming it shows little that is distinctive and because it receives the surplus of stock from two of the other three regions.

The Western Dales.—This is the hill and dale country of the Pennine Chain which runs southwards from the northern boundary at Middleton-in-Teesdale to Derbyshire, and eastwards to merge in the lowlands of the Vale of York.

The North Yorkshire Moors.—This block of high moorland in the north-east rising steeply from the plain is defined by a line from Saltburn south-westwards by Stokesley towards Northallerton, then south to Coxwold and from Coxwold east by Pickering to Scarborough.

The East Riding Wolds.—The boundaries of the wolds are marked by the points Filey, Malton, Pocklington, Market

Weighton, Driffild and Bridlington. They receive special mention because of their sheep stock.

The Vale of York.—From the Tees, the northern county boundary, the great tract of mixed grass and arable land stretches southwards by Northallerton and Thirsk (where the vale narrows between the Pennines and the North Yorkshire moors and Cleveland hills), York, Selby and Doncaster. The Valley of the Tees carries it eastward to the coast; only a low ridge broken by the river Derwent makes the main vale discontinuous with the wide Vale of Pickering which separates the North Yorkshire moors from the wolds; and the East Riding, the wolds excluded, may well be regarded as part of the same area.

CATTLE.

The pedigreed herds include practically every breed found elsewhere in the country. While these herds are individually quite up to the standard of those of other parts and can hold their own in the showyards, they are of comparatively small importance when the cattle stock is viewed as a whole. The overwhelming majority of the farmers are interested in the non-pedigree Shorthorn. One gets an illuminating indication of where the interest lies by watching the judging at any of the local shows and more especially at the Show of the Yorkshire Agricultural Society. The spectators at the judging rings for pedigreed stock have ample room, but around the ring where the non-pedigreed cows are paraded the space is packed and the shrewd audible comments made on the cattle and the awards tell of a lively appreciation of the proceedings.

To understand one of the chief factors that has influenced and is influencing the outlook of the majority of stockmen a short digression is necessary to describe the special circumstances. Within the vastness of the county we have the industrial area of the West Riding with about three millions of a population. Here is a market for liquid milk to supply which many cows are necessary. The farmers near these towns and villages have naturally turned to dairying and that in a very intensive form. In fact, so specialised has the production of liquid milk become that the dairyman must have every stall filled by a cow actually in milk, and that cow must if at all possible be at her best; that is to say at her third or fourth lactation. Cows are bought in when newly calved, are milked and fattened at the same time, and when dry are sold for slaughter. The lowering of yield due to pregnancy cannot be tolerated, and the non-productive dry period that normally intervenes between one lactation and another must be avoided.

While this "milk and feed" system, as it has been named, may be highly remunerative to the individual, and while these dairy-

men may under the peculiar circumstances be compelled to adopt it, it is almost tragic from a national point of view to see these splendid cows go for slaughter in the prime of life. However, looking on the bright side, we have here created an almost unlimited demand for cows—cows that will milk well and finish the lactation fit for slaughter. The ambition to produce females that will meet this usually remunerative demand has a very marked influence on the type of cattle bred all over the county. At first sight it might appear that this present-day demand is sufficient reason for the Yorkshireman's love for good cows and his ambition to breed them, but a glance at cattle history will show that this is not the whole explanation. The Shorthorn is descended from the old north-east of England cattle which were kept in the county of Northumberland and in the districts bordering on the Tees in the counties of Durham and Yorkshire. The early pioneers of the breed selected their cows from the common herds, and even in these early days it would appear that they had ample material from which to choose. The Booths and Bates carried on the work in North Yorkshire until the fame of the breed spread to the four corners of the kingdom. The stock therefore was famous for many years before the coming of the industrial era, and instead of assigning the reason for the breeding of good cows to this cause, it would be more correct to say that the demand for milk has only given an impetus to a practice that had already reached a high stage of perfection.

The Western Dales.—While no one part of the county can claim a monopoly in producing the cows required by the "industrial" dairyman, the breeding ground *par excellence* is the Western Dales. Here the grass farmer rears all his heifer calves. Those of the males that are reared are sold as stores at 12–18 months. More are sold at the calf stage for rearing by farmers in the lower country. The heifers are calved down twice or thrice and then sold to the dairymen. As a rule a cow leaves the dales at the beginning of her third lactation, and her heifer calves from the three calvings are retained to fill the gap. Naturally modifications of this practice are found. In the district of Upper Craven particularly numbers of farmers buy cows back from the dairies when the yields begin to be unprofitable and bring them round again to the next calving. This may be repeated more than once, so that a cow may spend several lactations in the intensive dairy. The number thus saved is, however, comparatively small. Some breeders supply young stock to the men lower in the dales; or, as another variation, they dispose of newly-calved heifers, again to go lower down to farmers who will retain them for one or two calvings. Dealing is in the Dalesman's blood; the cattle pass through numerous

hands almost invariably to a common destination and doom, the "milk and feed" dairy.

There are several very interesting points in connection with the production of these cows. It is not quite correct to use the term non-pedigree, as often the breeders can trace the ancestry of their stock back through many generations. Individual herds have reputations often as valuable and as well known as those of herds registered in herd-books. The use of pedigreed bulls is almost unknown in these dales, in fact there is a very decided aversion to their use. A breeder buys a bull-calf for stock purposes, usually from a neighbour, because he knows its mother to be a good-doing, well-bagged cow, not necessarily because the calf itself is a good one. The emphasis is laid upon the female side of the "pedigree," while the male side is almost ignored. Many bull-calves are bespoken before birth. Another point of interest is the extraordinary predilection shown for roan colours. A good roan cow will fetch as much as £5 more than an equally good red one!

Now, however produced and whatever criticisms may be levelled against the methods adopted, the result is an animal beautiful in conformation, a joy to behold. Unless one has actually seen these grand cows at the sales at Skipton, Gisburn, Hellifield, Hawes or Barnard Castle (S. Durham), to mention only a few of the markets, one can form no idea of the extraordinarily high average of quality that has been attained. That the fame of these cows has not spread "abroad" to the same extent as that of the Cumberland cows, may be ascribed to the fact that very few are "exported." The home demand can absorb them all. Indeed Irish cows have to be bought in to supplement the home supply.

The non-pedigree Shorthorn holds the Western Dales, and specialisation is all on the cows.

The North Yorkshire Moors.—On the high moorlands no cattle are grazed. In the valleys, also known as dales, we have a very useful type of dual-purpose animal. Compared with the cattle of the Western Dales we find more emphasis being laid on the quality of the bullocks for stores, and the specialisation on the production of the cow alone is not so intense, consequently a goodly number of pedigree Shorthorn bulls are used. In the dales opening on to the Vales of Pickering and York, most of the young stock are sold at about 18 months old as stores to the lowland farmers. Cows having had two or three calves are sold to the dairymen, but with the big market farther away, competition is not so keen and the cows are not so good (from the dairyman's point of view). In the dales westward from Whitby, many of the rearers fatten their own stock, a practice which is unknown in any of the other dale districts.

The Vale of York.—Here we have the usual mixture of types of cattle that is common to such mixed farming districts. The numbers bred fall very far short of making the farms self-supporting. Round the towns and villages, dairy cattle are kept, and the grazing and arable farms are stocked with stores reared locally in the upland areas and brought from Ireland. The only feature that might be considered of interest is that there is quite an extensive business done in the rearing of calves for veal. Not a few lowland rearers make a speciality of bringing calves on to be sold when three to six months old—another instance of the influence of the proximity of the industrial area.

SHEEP.

The hills and dales, the lowland grasslands and the arable farms are stocked with a plethora of breeds and crosses that baffles description. We have well-known pedigreed flocks of most of the breeds, but two only warrant special description in that they are indigenous to the county.

The Swaledale.—This sheep derives its name from the dale that runs westwards from Richmond in the north-west corner of the county. The formation of the Swaledale Dales-bred Sheepbreeders' Association dates from the 10th May, 1920, when at a joint meeting of the members of the Swaledale Sheepbreeders' Association and the Black-faced Dales-bred Sheep Society it was decided that the two bodies should amalgamate. Qualification for entry in the flock book is by means of an annual inspection conducted by inspectors appointed by the Association. The Swaledale is a typical mountain breed very similar in most respects to the Scotch Blackface. The face is of medium length, strong in feature with a tuft of wool on the forehead. The upper part of the face is dark complexioned, the lower part is grey or mealy. The type grows greyer with age. The wool is white except at the back of the head, where it is mixed with part black. It is not coarse.

It is claimed for the breed not only by breeders but also by the buyers of cast ewes that while it grows bigger and produces a finer wool than the Blackface, it is equally as hardy and can withstand damp conditions even better. It is distributed all over the central chain of hills meeting the Lonk in the north and the Penistones and Gritstones on the Derbyshire border to the south.

The Wensleydale.—Named after the dale that runs westwards from Bedale, this breed also claims Yorkshire as its county of origin. The beginnings of the breed, like most others, are a little obscure, but there is good evidence for believing that it is descended from the large white-faced "Mugs" of the Teeswater district. The Dishley Leicester was employed to refine it, and

the blue colour was introduced by Richard Outhwaite's "Blue-cap," a famous half-bred Leicester ram born in 1839 with a dark blue head and a nearly black skin.¹ This is one of the hardest of the longwool breeds, a big upstanding, long-sided sheep, with a characteristic deep blue colouring of the face, ears, legs and skin. A detailed description would be superfluous, as even the most casual visitor at the shows must have been attracted by the unique colouring. Pure flocks are kept very largely to supply rams for crossing, particularly with the mountain breeds, and the deep blue face is in great favour as it increases the darkness of the faces of the cross-lambs, a character of commercial value. Mention might be made of one peculiar character in the breed. In the pure flocks, although no black parents are used, the fall of black lambs is on the average about 15 per cent. Research by Dr. F. W. Dry, formerly of Leeds University, has revealed that the inheritance of black and white in Wensleydale Sheep follows the simplest Mendelian lines; black is a recessive factor that can be bred out. But on account of it Australia and New Zealand are closed to the breed, and, one consideration taken with another, the effect is detrimental at home.

The Western Dales.—On the higher reaches the mountain breeds are bred pure. Swaledales, Blackfaces and Lonks are the common breeds. They are very similar and fulfil the same function, existing under severe conditions of climate and food supply. Lower down where conditions are not so rigorous the mountain ewe is crossed with the Wensleydale tup. The resultant cross-lamb is known as a "Masham." This name ought really to be used only for the produce of the Wensleydale tup on the Swaledale ewe, but the term has been widened to include all lambs from mountain ewes with the Wensleydale as sire. The name, however, is very rarely found in other parts of the county. These "Masham" lambs are bought by the grass farmers in the lowlands or by those in the richest parts of the dales, to be wintered rough and fattened off the following summer. Practically none are folded on roots. Many of the Masham ewe lambs are bought by the breeders on the lower and better reaches of the dales, who put them to a Wensleydale tup again. The Masham ewe is a good and prolific mother. The lambs are known as "twice-crossed lambs." The "twice-crossed" lambs are bought by the arable farmers for fattening-off on roots. They are useful turniping sheep.

Here we have the gradation from the highlands to the lowlands common to all parts of the country. The mountain ewe herself, after three or four lambings, may move lower down; the first-cross ewe holds the middle position, producing by crossing again a lamb easily fattened and of suitable market size but which

¹ "British Breeds of Live Stock," Ministry of Agriculture and Fisheries.

requires better climate and a much more copious food supply. Without exception this gradation in the Western Dales is achieved by the use of the Wensleydale tup.

The North Yorkshire Moors.—The sheep commonly found on the high moorlands is the Scotch Blackface, and Swaledales are few. As in the western dales, crossing is practised on the better situated farms, particularly in the valleys. Rams for crossing are usually drawn from the pure flocks of the adjacent country, and the progeny takes on the character of the pure-bred sires popular in the locality. Tracing our way from the north-east round the foot of the hills we find the Wensleydale, the Leicester, and more rarely the Border Leicester, in use in the country sloping to the Tees. The Wensleydale prevails on the face looking west to the Vale of York for the production of the first cross. The lambs are styled "half-breds" and are indistinguishable from the west-country Mashams. Until recent years, the Wensleydale produced the second cross (twice-crossed) lambs as well, but now the Down breeds, mostly Oxfords, are coming in. Round by the southern slope the Wensleydale and Leicester compete for favour till farther east the Leicester predominates overwhelmingly over the few Wensleydales and Border Leicesters. The adjoining low country, the flat Tees estuary and the Vales of York and Pickering, can and do take all the annual surplus.¹

The East Riding Wolds.—The sheep stock of this wold area is characteristic and differs materially from that of the other parts so as to justify a separate description. Here the Leicester has long been supreme, and up to within very recent years its supremacy was not challenged. This breed was kept pure and formed the breeding and fattening flocks of the Riding; indeed the fountain of the breed may be said to have shifted to East Yorkshire. A serious outbreak of Foot and Mouth Disease in the winter of 1923–24, which sadly depleted the breeding flocks, and the change in outlook due to the public demand for smaller joints, have had an appreciable effect on the sheep stock. The practice of crossing the Leicester ewe with a Down ram, usually the Oxford, is distinctly on the increase. The lambs are fattened off on the roots. The losses due to Foot and Mouth Disease and the change over to crossing has brought about a very serious shortage of Leicester ewes for breeding. This may be a passing phase, but at the present Leicester ewes are eagerly bought at high prices at such sales as are held at Malton and Driffield. The docility of the Leicester, combined with its grand fleece and fattening propensities, and incidentally a good deal of sentiment, has enabled this breed to hold its favour in spite of changing markets. The Leicester ewe is still the ewe of the wolds, but the first line of defence has gone down before the Down crosses. Near the wold area, which is the source, and farther afield, the

Leicester ram has stood in high favour for generations as a crossing sheep.

Vale of York.—Here one finds the heterogeneous assemblage of breeds and crosses common to such mixed grass and arable lowland areas. Cross-lambs from the dales, from Lincolnshire and from the north are fattened on the roots. The breeding flocks of the grasslands consist of all sorts and conditions, Black-faces, Mashams, North Ewes (Border Leicester-Cheviot), Mules (Border Leicester-Blackface), and Down crosses, to mention a few of the more common. These are crossed with one of the Down breeds, the Leicester, or more rarely the Border Leicester. The lambs in most cases are sold fat off their mothers, either as very early lambs or during the summer or early autumn. As with cattle, the county is not self-supporting. Thousands of lambs and ewes are bought in every autumn to supplement the numbers bred at home. These come mostly from the Border counties.

PIGS.

The pig population of our county is dense where the human population is congregated, but even with our thickly inhabited districts we do not carry more pigs than the proportion indicated by our area—approximately one-tenth. Over the wide expanses of moorland pigs are kept rarely or not at all.

Our pedigree herds are well known; in fact, several have gained world renown. As with cattle, the majority of farmers are more interested in the non-pedigree stock or crosses than in the pure breeds. The breeder of pedigree pigs, however, does exercise a more potent influence on the commercial pig stock than does the breeder of pedigree cattle. Pedigree or pure-bred boars, if not actually outnumbering cross-breds, are at least more numerous in proportion than the pure-bred sires among cattle, and the influence of the pure sire is by no means inconsiderable.

The industrial area of the West Riding and the towns dotted along the northern boundary in the Tees Valley provide us with an exceptional market for pork and bacon. Not only is the population large, but the consumption of pig and pig products per head of the population is higher than in most other parts of the country. The immediate demand is more especially for pork as distinct from bacon. Bacon is required also, but the need is largely satisfied from foreign sources. Incidentally, it may be noted that the pork pig is larger than that favoured in the south. Pigs up to 10 stones dead weight go for pork. The breeder and fattener aims at producing a type that will grow into a useful bacon pig if markets are depressed at the time the pig reaches the pork weight.

For this purpose the Large White-Middle White cross is very popular. There are, however, many other crosses that can meet these requirements, and one finds Berkshire, Large Black and even Tamworth crosses in number. It is impossible to follow the lines adopted in connection with the cattle and sheep as the distribution of the pig does not conform to any geographical area. The numerous pedigree herds and the various crosses are well distributed over the county except in the high moorlands. In the northern area the Cumberland is common and is popular for crossing purposes. It is rarely seen in the south. Widely spread over the north of the county and more especially in the dales of the West and of the North Yorkshire moors is a type of pig which carries several designations—the “Dales Pig,” “The Common Pig,” or the “Yorkshire Pig.” This pig is very popular, especially with the smaller farmers. It is white with blue spots or patches, droop ears, a head somewhat like the Large Black, and a very conspicuous absence of hair. The type would appear to have been bred for a great number of years, but one very much doubts if it has remained true without occasional out-crossing with other breeds. I have known Saddleback and Large Black boars to have been used. Be that as it may, the fact remains that in these districts, unless a young pig has droop ears, shows blue coloration somewhere and is almost hairless (a very important point), it is almost impossible to find a purchaser. The “breed” does not appear to possess any special intrinsic value, but sentiment is a strong force in its retention.

Although breeding is quite common and is not confined to any one district or districts, it may be said in a general way that the breeding districts for cattle stock are the breeding districts for pigs, with the outstanding exception of the industrial area, where pigs are important in the farming business, whereas calves are not.

Mention has been made of the splendid pork market within the county, but this market becomes glutted periodically, and the Yorkshire farmer encounters the same slumps that we find recurring with unfailing regularity elsewhere. Partly to safeguard against this apparently inevitable cycle and for other obvious reasons the farmers have combined to erect a co-operative bacon factory. This factory has been running for about two years and as many as nine hundred pigs have been dealt with in one week.

One would suppose that this would make an appreciable difference to the number of pigs exposed in the open markets, and time will prove whether the hopes of the pioneers will be fulfilled. Only a small percentage of the pigs sent for slaughter can be graded first class; fortunately the defects are more in overweight and overfatness than in faulty conformation. Some

pigs that the pork butcher would not buy because of their poor quality have been railed to the factory as a convenient method of clearance. The prime difficulty is more fundamental, however. A very large proportion of the farmers kill and cure pigs for home consumption. They prefer plenty of weight and fat, and consequently they have great difficulty in comprehending the exact requirements of the urban demand.

HORSES.

The rivalry that exists between the two great heavy breeds, the Shire and the Clydesdale, reaches a climax here. The two breeds actually meet, and incidentally so do their respective advocates. The great majority of horses kept for agricultural purposes are naturally to be found in the Vale of York and the East Riding. In the south the Shire is unchallenged. In the north the Clydesdale is most commonly favoured, and between these extremes the breeds meet, intermingle, and are crossed. It is of interest in this connection that the Shire found on the ordinary farm has less hair on the leg than we see in the showyards, and the men who stick to the Clydesdale prefer a bulky horse not quite the Scotsman's type. Many prefer a cross between these breeds, and it is claimed, but with what justification is doubtful, that the Clydesdale stallion on the Shire mare produces a better animal than the alternative cross.

The Dales Pony.—In the dales an active, hardy animal capable of moving a moderate load quickly is required, for which purpose the Dales Pony is admirably suited. The clean-legged hardy little animal standing around 14 hands high would be better described as a miniature cart-horse than as a pony. The ponies are used for draught purposes, do all the work on the farms, and are useful for conveying the family to market and in the saddle. They are very sure-footed.

The Fell Pony.—In the mountainous districts of the north-west corner of Yorkshire, this sturdy, active and hardy little pony is bred. It stands somewhat under 13 hands high. Extremely powerful for its size, both in harness and as a weight-carrier, it is well adapted for finding its own living and performing the strenuous work of the hill.

The Cleveland Bay.—No description would be complete that failed to mention the Cleveland Bay and its offshoot the Yorkshire Coach Horse, although both have fallen on evil days. The Cleveland Bay has existed in the North and East Ridings for probably more than two hundred years. Its clean leg and great strength make it a very useful animal for general agricultural purposes.

The Yorkshire Coach Horse.—This breed originated from the Cleveland Bay by the infusion of thoroughbred blood. It has,

however, been recognised as a breed for a great number of years. It is very similar to its Cleveland progenitor, but taller and showing rather more style. The change in the methods of locomotion has inevitably hit these two breeds very hard. Only their general utility on the farm, their usefulness for crossing and a spasmodic foreign demand have saved them from extinction.

In a county where there are at least twenty different hunts the interest in hunter horses is very keen. No special feature, however, can be said to differentiate the hunter of Yorkshire from that of other parts. Lastly, attention may be drawn to the world-famous stud at Sledmere in the East Riding wolds, where so many great thoroughbreds have been bred. Members of this stud have made turf history, and at the annual sales at Doncaster the yearlings are eagerly sought after, fetching high prices.

In the broadest survey and all exceptional features and tendencies set on one side, our stock seems to occupy an intermediate position between northern and southern types, for many streams of influence meet within our borders. A world of meaning lies in an expression not infrequently heard "The Shorthorn and the Leicester," which coming down traditionally epitomises for many a Yorkshire farmer the fundamentals of stockbreeding. Dual-purpose Shorthorn cattle, the heifers to milk, the bullocks to feed, predominate; among much intermingling of breeds of sheep the Leicester plays no inconsiderable part as a sire; pigs are bred with an eye on both the pork and bacon market; Shire and Clydesdale have met to the forming of new ideas on both sides. This "middle way" may not have so much of glory, but it has at all events the elements of safety. Let it not be imagined that it ends in a conglomeration of things mixed and nondescript; types have been evolved that have met changing conditions satisfactorily and, if need be, are capable of further moulding.

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DALES AND FELL FARMING.

A WHILE ago, in company with an agricultural friend from Lincolnshire, I sat resting on the steep side of a lonely ravine in a remote part of the vast, rugged entanglement of dale and fell in north-west England. Opposite to us the other side of the V-shaped cleft flung itself aloft from the clattering beck in

the trough of the valley, itself 800 feet above sea-level, a vast fell pasture. On its lower slopes mazes of hazel scrub straggled in picturesque disorder; here and there clumps of larches reared their masts and spars; higher again great beds of barren scree cluttered the rough scarp—thousands of tons of fragments dropped through the ages from the grey limestone cliff-like scars cropping out from the precipitous steep above. Higher again the rugged pasture clambered up through tousled bracken and rustling bents to a brow of blazing purple heather, behind which—though unseen from where we were—lay a great flat of gloomy desolation, of swamp and moss-crop, of grim peat hags and deep black gullies, before the landscape finally swept swiftly up to the summit ridge of storm-shorn wilderness bepatched with Alpine herbage.

“That’s what I call grand,” observed my Lincolnshire friend. Then he added fervently, “But I would not like to have to farm it.”

Probably there are few lowland agriculturists, accustomed only to lush, low-lying meadows and arable land, who would not be appalled at the thought of having to wrest a living from these savage uplands; yet generation after generation of dalesmen, bred of the soil, take up the calling as a mere matter of course, and wring, not only an adequate subsistence, but often a comfortable competence, partly from wild and largely from but half-tamed nature.

In a great many instances the operations of the dales farmer are spread over a wide and scattered area; the compact farm within the ring fence, with its homestead, byres, stables, barns and rickyard clustering together in one convenient nucleus, is rarely seen, and it may be—and often is the case—that the agriculturist farming hundreds of acres of dale and fell has to hire a house in the village in which to live. His farm buildings are dotted here and there, frequently a mile or more apart.

Along the troughs of the main dales lie more or less extensive widths of fertile holms, alluvial in origin, providing good meadow land. The lower and more gentle slopes at the feet of the fells are also cultivated as meadow land, above which the mountain pastures tower to the moorland heights. Now, when all this land was first enclosed and parcelled out among the freeholders, fair-play demanded that each interested party should benefit in proportion to his rights, both in regard to meadow land and mountain pasture, and so the land was cut up and distributed, each freeholder receiving his piece of this and that meadow land and his section of this and that rough pasture. Moreover, much of the land has changed hands, while, again, the farmer may simultaneously rent land from two or three landlords. Thus it comes about that during the hay harvest he is

continually shifting his crew of haymakers considerable distances from meadow to meadow.

The hay, however, in these instances is not necessarily carted similar distances, for it is an ancient custom that the meadow should contain a barn (wherein the hay is housed) and byre, in which the farmer winters a due portion of his stock, and in this way the land is to some extent assured against starvation by receiving the dung from the fodder which it produces. But the system has this drawback, that it entails a long, weary round twice daily to milk and attend to the cattle.

While the bulk of the hay is grown on the holms and the gently rising land adjoining, there are, dotting the loftier, wilder landscape, tiny moorland farms, 1,500 feet above sea-level. A small grey huddle of rough-built cottage, barn and shed, backed by a boulder-strewn steep of desolation; in front and to left and right a little plateau of mountain meadow won from the wild—a grassy oasis in the upland wastes; that is the moorland farm of the remoter dales. It may be that it is in the "take" of some farmer operating from the village down in the valley a couple of miles away; perhaps a hind spends here a solitary existence looking after the handful of cattle. Many a time have I seen a farmer, down in the dale, his main hay harvest won, load up his cart and sled with bedding, baggage and grub, and start out with his family to his moorland "saeter" to gather in his crop there.

In those districts within handy reach of suitable transport service a considerable amount of dairy farming is carried on, but in the more secluded areas the cattle the dalesman rears are for the market. Here and there you may come across a few black Aberdeen-Angus beasts—"Black Polls," the dalesman calls them; occasionally a Hereford or two; odd fanciers may now and then be found cherishing small herds of Friesians or Alderneys, and there are dales farmers who have made something of a speciality of "getting up" Highlanders for the market. But the great stand-by is the utility Shorthorn, the breeder disposing of his stock for the most part at some convenient auction mart. His incidental milk, after supplying local wants, he utilises in feeding his calves, in churning into butter, and in making a few cheeses of the Wensleydale type. In many of the old farm-houses there is a cheese-room with its cheese-press, while one may still, if lucky, make a find in the shape of an ingeniously constructed chair so contrived that the weight of the sitter supplied the desired pressure to the cheese concealed beneath. Needless to say, the heavy-weight visitor was eagerly installed in this seat of combined utility and honour. The dales cheese trade—the products of which are most frequently sold as "Wensleydale"—might probably and profitably be greatly extended

were a better system of distribution substituted for the happy-go-lucky methods which too often prevail.

It is, however, with his flocks, rather than with his herds, that the dales farmer is mostly concerned. The moorland wastes and mountain steeps are the natural pasture of sheep, but of sheep only of a hardy type, inured to climatic rigours that would speedily decimate the flocks of the lowlands, able to pick up a healthy living where their cousins of more delicate fibre would starve to death. The Scottish Blackface, agile and tenacious of life under the most exacting conditions, fills the specifications admirably, and forms, in the main, the base of the hill flock-master's operations.

Local conditions and environment are probably the chief causes which have led to the establishment of varieties of these hardy hill sheep which are now recognised as distinct breeds. Among these are the little die-hards of the Cumberland fells known as Herdwicks, a variety so firmly rooted to their own locality, each flock to its own accustomed pasturage, that it is not an uncommon thing, when a farm changes hands, that the Herdwicks are taken on at a valuation, like other fixtures, by the new occupier. Nay, more, survivals are still known of the old practice by which the new-comer rents the flock, instead of buying it, along with the land and buildings, valuations being made when he enters and when he leaves, the difference being paid or received as the case may be. Then on the bleak moorland heights on the Lancashire and Yorkshire border another variety of Blackface, the Lonk—corruption, no doubt, of "Lancs."—predominates, while in the Yorkshire dales still another variety, the Swaledale, is much favoured for interbreeding purposes by many of the farmers.

Still, speaking generally, the Scottish Blackface is the foundation upon which the dalesman builds, and here he is faced with a fascinating problem. It is told that a certain learned philosopher, having being inveigled into attempting an experimental round of the Royal and Ancient Game, defined golf as the art of putting small balls into small holes with implements very ill adapted to the purpose. Something of this sort of difficulty confronts the dales flock-master. His game is to put on to a critical market wool and meat with implements, in the shape of sheep and pasturage, apparently ill adapted to the purpose. The solution lies in cross-breeding, and his first cross is between the Blackface ewe and the Wensleydale or Border Leicester ram, both these varieties having been evolved from crossing the Leicester with an old big North-country sheep known as the Teeswater. In the Yorkshire dale country the Wensleydale is usually employed, but further north the Border Leicester is the first favourite. In either case a materially

improved half-bred is the result. The half-bred ewes, encouragingly prolific, are again crossed with the Wensleydale or Border Leicester ram, and their progeny, known as "twice-crossed," represents the ultimate end of the average producer's efforts, an animal yielding a fair fleece of good quality, producing a generous amount of excellent mutton, and fattening quickly for the butcher.

Variations of this common routine are frequent. Here a dalesman utilises the Swaledale in place of the Scottish Blackface; or, having purchased half-bred ewes, the produce of crossing the Blackface with the Border Leicester, from further north, he further mingles the strain by making the second cross with a Wensleydale. Again, there are those who advance one more step by crossing the twice-crossed with some other variety of their fancy, while others, with a richer pasturage available, may make the second cross with an Oxford. Of course, the rule is that each step in refinement renders richer feed desirable, and so the breeder directs his energies to producing varieties for which experience has taught him his pasturage is best adapted.

Of recent years attempts have been made in certain directions to improve the Scottish Blackface, and it is claimed that the efforts have met with an encouraging amount of success. The idea has been to introduce into the Scottish flocks an admixture of Lonk blood. Now, the Lonk, while resembling very closely the Blackface in general appearance, is a much heavier animal and produces a far superior wool of the hosiery class; but, while capable of wintering well under severe conditions on the Lancashire moorlands of, say, 1,000 feet above sea-level, it is not so hardy as the Blackface and cannot stand the gruelling exposure on the loftier heights which the latter will endure. At first the cross was tried between a Lonk ewe and a Blackfaced ram, and the resultant half-bred showed a desirable combination of the Blackface's commendable qualities with the greater bulk and superior wool of the Lonk. So far so good, but there was a serious obstacle in the way of putting this process into operation on a large scale. Such would entail a flock of Lonk ewes, and in a large number of instances the Blackface breeder has available no winter pasturage such as the Lonks would require. So the other cross was tried—the Lonk ram with the Blackface ewe. Again, it is said, satisfactory results have accrued—the blending of the Blackface's hardihood with the finer fleece and greater bulk of the Lonk, and so, if the claim made can be substantiated, it would appear that the way lies open for a general improvement in the breed which is, so to speak, the raw material of the dales flock-master, to whom we now return.

Even to him the wintering of his ewe flock is a matter for

deep concern. With a vast area of mountain and moorland pasture at his service, he can carry a big head of stock during the summer, but the winter severely cripples his resources. Probably he has rights for a certain number of sheep on an unenclosed, stinted moor, where, in common with the sheep of his neighbours, a bulk of his flock graze, under the care of a shepherd elected by the "gate-holder" from spring until November, when the combined flock is brought off the moor, shed according to the marks of the owners, and put upon the lower slopes. Meanwhile the surplus lambs have been disposed of at the autumn sales, fairs, and auction marts. Later, say about Christmas, it is a common expedient to relieve the strain by sending the ewe flock away on to the turnips in some less exposed, arable part of the country. In the case of the flock-master on a large scale, he may purchase the crop—in the ground—and despatch his sheep in charge of his own shepherd. Where the smaller man is concerned, the speculative middleman comes on the scene. He buys a certain acreage of turnips, then arranges with his clients to take their combined flock at so much per head. Having assembled his charges, he drives them to the nearest railway station, where he trucks them to their destination, often fifty or sixty miles away, remains with them until the promise of spring is once more in the air, when he brings them back in good shape for the lambing on their native fell-sides. The adoption of such an expedient is in many cases little short of an absolute necessity, but, while possessing advantages, it is not without its grave, if remote, risks, as was brought home to several owners in recent years when foot-and-mouth disease broke out in the districts where the ewes were "boarded out" at the very time when they were due to be brought home for the lambing.

Nor is the fell farmer free from anxiety for the rest of his flock while the breeding ewes are away. Swept by sudden and violent snowstorms, the sheep, though brought down from the summit heights to the more accessible fellside pastures, are ever liable to be "over-blown," and expeditionary forces of dogs and men, the latter armed with shovels and hay-rakes, spend long laborious hours ploughing their way through the drifts in the teeth of piercing blizzards, searching for, and digging out, the living prisoners from their whited sepulchres. Some dogs are singularly adept at locating the buried victims, eagerly snuffing at the holes made by the long rake handles in probing the drifts, while others, though they may be excellent sheep-dogs in a general way, may prove rank duffers at this wintry rescue work.

Formerly, with the approach of winter, it was a common practice for the dales farmer to "salve" his sheep. This operation consisted in working into the very roots of the fleece with the fingers a mixture of whale oil and Stockholm tar, parting



Photo by]

FELL PONY MARE AND FOAL, "LINNEL FLIRT," THE PROPERTY OF MR. ROY B. CHARLTON.
[Sport and General.

deep concern. With a vast area of mountain and moorland pasture at his service, he can carry a big head of stock during the summer, but the winter severely cripples his resources. Probably he has rights for a certain number of sheep on an unenclosed, stinted moor, where, in common with the sheep of his neighbours, a bulk of his flock graze, under the care of a shepherd elected by the "gate-holder" from spring until November, when the combined flock is brought off the moor, shed according to the marks of the owners, and put upon the lower slopes. Meanwhile the surplus lambs have been disposed of at the autumn sales, fairs, and auction marts. Later, say about Christmas, it is a common expedient to relieve the strain by sending the ewe flock away on to the turnips in some less exposed, arable part of the country. In the case of the flock-master on a large scale, he may purchase the crop—in the ground—and despatch his sheep in charge of his own shepherd. Where the smaller man is concerned, the speculative middleman comes on the scene. He buys a certain acreage of turnips, then arranges with his clients to take their combined flock at so much per head. Having assembled his charges, he drives them to the nearest railway station, where he trucks them to their destination, often fifty or sixty miles away, remains with them until the promise of spring is once more in the air, when he brings them back in good shape for the lambing on their native fell-sides. The adoption of such an expedient is in many cases little short of an absolute necessity, but, while possessing advantages, it is not without its grave, if remote, risks, as was brought home to several owners in recent years when foot-and-mouth disease broke out in the districts where the ewes were "boarded out" at the very time when they were due to be brought home for the lambing.

Nor is the fell farmer free from anxiety for the rest of his flock while the breeding ewes are away. Swept by sudden and violent snowstorms, the sheep, though brought down from the summit heights to the more accessible fellside pastures, are ever liable to be "over-blown," and expeditionary forces of dogs and men, the latter armed with shovels and hay-rakes, spend long laborious hours ploughing their way through the drifts in the teeth of piercing blizzards, searching for, and digging out, the living prisoners from their whited sepulchres. Some dogs are singularly adept at locating the buried victims, eagerly snuffing at the holes made by the long rake handles in probing the drifts, while others, though they may be excellent sheep-dogs in a general way, may prove rank duffers at this wintry rescue work.

Formerly, with the approach of winter, it was a common practice for the dales farmer to "salve" his sheep. This operation consisted in working into the very roots of the fleece with the fingers a mixture of whale oil and Stockholm tar, parting



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the wool to the skin in close rows, until every inch of the fleece was heavily charged with the tenacious unguent. It was a long and tedious process with a twofold object—to protect the sheep from vermin or contagion, and to aid it in resisting the wintry weather. I have known a fell farmer even “salve” his horse as a protection against the inclemency of a dales winter. When the double-dipping order came into force, the dales farmers fought hard for the substitution of their pet “salving” process for the second dip, but the powers that be would have none of it. The farmer might, if he liked, continue his “salving,” but if he did, he must dip as well, and in the face of that he reluctantly abandoned the old practice, making a greasy dip serve instead, since which “salving” has been a thing of the past and nobody seems one penny the worse.

With no ploughing, sowing, reaping or thrashing, the fell farmer has but a light wage bill to meet. If he is blessed with two or three hefty sons he will frequently run his holding of anything up to seven or eight hundred acres without additional assistance, save that he may casually employ at odd times a rabbit-catcher or a drover, and when his meadows are ripe for mowing in July he will select a couple of “Paddies,” whom he hires for a month, from the tide of Irish harvest labour that flows through the dales from hiring fair to hiring fair. Incidentally, it may be observed, these Irish harvesters, who have already fulfilled one haymaking engagement in the lower-lying districts, find their way from the dales to the lowlands for the corn harvest, following that with a turn at potato gathering, and return home with, if of frugal habits, a very nice sum to their credit.

Having no arable land, the fell farmer has no straw. This does not trouble him as to the thatching problem, for, his hay all being on mows in his barns—save on the rare occasion of a bumper crop—he has no ricks to thatch. Winter bedding, however, he must have, and this he harvests from the wild. Selecting a dry spell, he is away with his little gang of helpers, armed with scythes, on the lofty moor edge, where the water glints from some little runnel in the black peat bog through a dense lattice of bristling rushes. Swish go the scythes through the mass of long wiry spikes that fall in heavy swathes. With luck in the choice of weather, two or three days’ hearty slogging may see the accumulation of a sufficiency for the winter’s needs, when the rushes are allowed to dry broadcast on the stubble before being piled on the sledges and carried home. For this purpose, as for many purposes in fell farming, the sledge is absolutely necessary, for no cart could live over the rugged trails negotiated—across the tufted bents and boulder-strewn infant water-courses, often at perilous angles, or down the rocky terraces of the “rough-hewn stairway to the clouds.”

It may happen, as it frequently does, that a sufficiency of rushes is not easily available, in which case the farmer ekes out his supply with the next most convenient thing. In somewhat similar style he attacks the great beds of russet bracken, bringing it down the hillsides on sledges and stacking it in his barns for litter. It might easily be thought that dried bracken would be much more suitable for bedding than rushes, but it has an evil reputation, and the farmer utilising it does so with caution. While it may serve well in the stable, in the byre great care is needed to see that the stock do not eat it, young calves being possessed of a catholicity of taste which embraces everything they can get in their mouths from the drapery hung out on the clothes-line to the cast-off linoleum on the scrap heap. In the event of their swallowing their bracken bedding, a practice to which they are prone, the indigestible stuff is apt to ball in the stomach and set up internal trouble which may end fatally. This is why, when he can get them, the fell farmer prefers rushes for his winter litter.

Through a fairly mild winter life on the dales or fell farm goes on in somewhat leisurely fashion, save that the daily rounds must be made to the stock in the various byres and pastures, but with the awakening of spring the farmer's activities leap into full tide with the lambing of the ewes, and thereafter until the close of another autumn the various stages in the annual round follow closely on the heels of each other. Of these routine events none would, perhaps, strike the lowland agriculturist more impressively than, say, the gathering of the sheep on a great mountain heath for washing.

Maybe a combined flock of 1,500 hardy Blackfaces and half-breds are scattered over 2,000 or more acres of a savage area of cloud-swished heights that present the same general untamed appearance that they must have done when the skin-clad Brigantes roamed the North-country wilds—an unkempt upheaval of rock and heather, of moss-hag and mountain grasses, and of bog and bents, the eerie silence of whose solitudes is only broken, normally, by the bleat of the sheep or the cries and cackle of the moor fowl.

Previously the word has been passed from homestead to homestead among those concerned, as of old the fiery cross went round calling the gathering of the clans, and by four o'clock on the appointed morning, hardy young farmers, stoutly booted and legged, their collies at their heels, are leaving their grey stone homes down in the adjoining dales and climbing the fells to this or that end of the moor to be driven according to plan. By six o'clock, while all the tangled upland vegetation is still soaked with dew, the line of men and dogs is arranged in widely open crescent formation, and the round-up begins.

Steadily advancing, squelching through the swampy patches, skirting the rocky scars, plunging thigh-deep through the tangled heather, beating a way with sticks through the rushes, the ground is covered so that it is rare for any sheep to escape the notice of the men or the eyes of the ranging dogs. Soon an ever-growing collection of protesting sheep is moving on before the relentless cordon, augmented by dribblets driven in by the flanking horns of the crescent, until the collection becomes an extended crowd. And so the march goes on, constantly gathering strength like a woolly snowball. Meantime another line of drivers has been operating from the opposite end of the moor, and so, in due course, the converging flocks pour their "baa-ing" tides into the arena selected for the washing.

Here, beside a brawling moorland beck, are collected a numerous fatigue party, who have formed commodious pens with hurdles, while the beck has been dammed with boulders and turfs until the impounded water provides a convenient, waist-deep washing pool. Willy-nilly, the congested horde of sheep are marshalled into the pens, the selected washers take their place in the pool, and a couple of stalwarts, stationed at a gap which gives egress from the pens on to the bank of the stream, seize the sheep, one by one, and swing them into the water. Here the waiting washers methodically take them in hand, sousing, rubbing, "dollyng," until the water pours from the pool over the improvised weir in an ochre-coloured cataract. As each sheep is released from the hands of its tormentor, it swims ashore to join its dripping fellows who have already passed through the ordeal by water, and raises its voice in the bleating chorus of malcontent.

The lambs receive summary, but less drastic, treatment. Other helpers, working inside the pens, simply collar them as they come at them, and heave them over the hurdles into the pool, out of which they are allowed to swim at will.

A big moorland sheep-wash, conducted under a brilliant summer sky, with its babel of bleating, its incessant movement, its cross-fire of merry chaff and jest, the flashing water, the background of purple heather—not to mention the hampers of brobdingnagian sandwiches washed down with hearty libations of nut-brown ale—is an event not easily forgotten by the casual visitant.

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THE PRINCIPLES UNDERLYING THE PLANTING OF FRUIT TREES.

IN the planting of trees, as indeed in all the other arts of the husbandman, there is great diversity of practice. And yet if the matter is followed up, there are sound reasons for these seeming contradictions in methods. Bearing this in mind, it is here proposed to give a brief account of the relation of the tree to its surroundings, and on that foundation to reconstruct the principles underlying the transplantation of fruit trees. But it is necessary to state at once that present knowledge of the life processes of the tree is still fragmentary, and consequently the laying down of principles governing practice are as imperfectly understood. Nevertheless, if it be recognised that the existence of acute differences of opinion is itself an indication of the need for more far-reaching research and experiment, then it is permissible to construct principles on the basis of facts already ascertained.

I. THE TREE AND ITS SURROUNDINGS.

From the point of view of tree planting, the first concern of the grower is to establish an adequate root system, which will enable him to build up a healthy fruitful tree. Primarily then the problem is one of root growth and the influence of internal and external conditions upon it. Subsequently the question of shoot growth enters the discussion in connection with the fact that root and shoot are interdependent; they supply each other's needs and tend to maintain a state of mutual balance in their growth.

THE INFLUENCE OF SOIL CONDITIONS.

Excluding considerations of soil fertility, the soil conditions which mainly influence root growth are air content, moisture and temperature: variations in these factors are principally due to seasonal changes and to differences in soil type and tilth. A supply of air and water is necessary for healthy root growth, but because air content and water content of the soil stand in an inverse relation to each other, it follows that a large increase in water content means a serious deficiency of air, and vice versa.

Soil type is of great importance. As a rule light, porous and well-drained soils contain most air and cannot attract water from a great depth; whilst heavy, compact and clayey soils contain the least air, readily become water-logged, and retain their moisture longest, they can attract water from depth, but only slowly.

The effect of change of season on these factors is very definite. With the approach of winter the water content of the soil increases and may ultimately result in saturation or water-logging; then

in March and April with the drying air and greater heat of the sun an abrupt falling off of water content occurs. That is to say, the water supply is more than adequate until early spring, when there may be sudden and serious deficiency. It is clear from these facts that as far as the planting season is concerned, soil-air conditions are best in the early autumn and steadily deteriorate with the advance of winter, until they are at their worst in the spring when sudden amelioration occurs. The changes in soil temperature show a parallel deterioration; from September onwards the soil cools rapidly, particularly in periods with clear fine nights; from December to March soil temperature is at its lowest, it changes but little from day to day, and is often so low that very little root growth is possible; in March and April the soil warms up rapidly to the summer conditions.

THE ROOT SYSTEM.

The distribution of the roots in the soil has only been studied carefully in recent years, and the main factors governing their arrangement cannot yet be considered to have been ascertained definitely. Nevertheless present indications suggest that the general form and arrangement of the roots primarily depend on the root-stock and not on differences in soil or other circumstances. These latter factors do however modify root development, and probably the root is more affected by differences in environment than is any other part of the tree. Thus the external soil factors of aeration, moisture, nutrition, mechanical resistance and the internal factor of scion influence all tend to modify both the arrangement of the roots in the soil and the relative amount and distribution of fibre and coarse roots.

The influence of aeration and moisture can be considered jointly, for they are mutually dependent. Superabundance of water means deficiency of air, and vice versa, and it is the deficient factor which limits the amount of growth. Thus in drought, roots tend to grow towards water supplies, and it follows that a deep-rooted tree can resist drought better than a shallow-rooting one, and even more so than the newly planted tree with roots not re-established. Where aeration is poor, fibrous roots freely form near the surface, or seek cracks and fissures deeper in the soil. Consequently much of the rooting in badly drained clays is superficial. Medium loams provide the best conditions, for they supply adequate moisture and air to the roots and vigorous fibre development is stimulated.

The effect of local variations in soil fertility is too complex a subject for satisfactory discussion here. Local profusion of fibrous roots develops where rich humus or other organic matter accumulates, an effect in part due to the moisture-retaining qualities of fertile soil and in part to its direct nutritive value.

The mechanical condition of the soil may also modify the direction of root growth to a marked extent, because roots whilst young and actively growing are delicate structures and naturally take the line of least resistance. Thus the direction of growth will follow the line of soil cracks and fissures, the borings of worms and other soil inhabitants. Roots will also freely enter well-tilled soil, but they skirt underlying rock and soil pans.

Scion influence on root development is twofold; the scion may produce roots from its own stem just above the union, and it may also affect the root system of the stock. Probably strong-growing varieties tend to increase the general vigour and extent of the root system as a whole, but generally the influence of difference of scion on the root system is less marked than the effect of the soil factors already described.

THE BALANCE BETWEEN ROOT AND SHOOT.

Before any part of a tree can grow, it requires a supply of two distinct classes of material, namely, inorganic salts dissolved in water (*e.g.* nutrients in manures and the soil water) and complex assimilated foods (*e.g.* sugars and other carbohydrates). Water and dissolved salts are obtained from the soil, the amount supplied depending on the fertility of the soil and the extent of the root system; the more extensive the roots the greater is this raw food supply. Organic foods, especially the carbohydrates, are manufactured by the green leaves, which are able to absorb energy from sunlight and build up these foods from such simple material as water and carbon dioxide gas; thus the supply of organic food depends on the extent of the leaf surface, and it increases with extension of the shoot system. It is very clear then that root and shoot are dependent upon each other; for root development is ultimately governed by a sufficient supply of organic food provided by the leaves, and shoot extension equally depends on a supply of water and salts from the roots. It is also known that the ratio between these two forms of food tends to influence the kind of growth made. Vigorous wood growth is associated with an abundance of water and salts, particularly nitrogen compounds, which utilise for extension growth all the carbohydrates manufactured by the leaves. Fruitfulness follows a decrease in rate of growth, and is associated with a smaller supply of inorganic food and a definite accumulation of carbohydrates in excess of immediate requirements.

Since the relative amount of these two forms of food reflect in a general way the respective activities of root and shoot, it may be anticipated that the growth made by the root will be related to the growth made by the shoot and vice versa. In actual practice it is not possible to visualise any simple growth

relation between root and shoot, because it is not merely a matter of the length and type of root which determines the amount of root action, but also the state of the surrounding soil, which modifies absorption by the root.

In addition to the regulation of growth in length, there is a remarkable connection between growth in thickness of root and shoot; increase in the number and size of the coarse roots is governed by the thickening of the stem, and depends directly on the amount of feathering of the stem, particularly near the ground level.

THE EFFECT OF CULTURAL PRACTICES ON TREE GROWTH.

It has been granted that the natural growth of a tree tends to maintain a balance between root and shoot, but under cultivation trees are rarely left to their own devices. Cultural treatment may entirely alter the normal balance of the tree, and properly applied it provides a means of manipulating natural growth tendencies in order to increase the yield and quality of the fruit.

Broadly speaking, treatment applied to the roots, which either restricts or invigorates root action, is soon reflected in a corresponding decrease or increase in shoot growth. For example, clean cultivation or the application of nitrogenous manures generally invigorate root development and lead to stronger wood growth. On the other hand, in the grass orchard the presence of the turf adversely affects soil aeration, moisture and the supply of plant nutrients, particularly in the drier parts of the country; under these conditions root extension is restricted and natural balance is maintained by reduced wood growth. The practice of root pruning in the winter is followed by reduced wood growth during the following summer, and the same effect is shown even more drastically by the transplanted tree.

Treatment altering the root-shoot balance, when applied to the shoot, is responded to diversely. Thus leader pruning of the shoots during winter upsets the balance in favour of the root system and the tree responds by more vigorous shoot growth and a reduction in the extension of the root. Much depends on the season of pruning, and the same kind of pruning carried out in midsummer is actually found to check shoot growth instead of increasing it. In this connection it should be borne in mind that growth depends on an adequate supply of leaf-made food, and the difference between the effects of summer and winter pruning in respect of this supply is obvious. Also a tree carrying a large crop might be induced to fruit in the subsequent season by judicious thinning and leader tipping, whereas a light cropping tree might be forced into unproductive growth by such treatment.

These few instances illustrate the nature of the delicate mechanism of tree growth and response. But successful manipulation of the root-shoot ratio generally comes the way only of the grower of long experience and intimate knowledge of his varieties, soil, root stocks and the special circumstances of the individual tree. Even then there is an element of luck in the uncertainties of future weather, of pests and diseases and of their effect on anticipated growth and cropping.

II. THE PROCESS OF TRANSPLANTING.

If a perusal of the preceding account has succeeded in conveying to the reader's mind a picture of the growing tree, its relation to its surroundings and its response to changes in treatment, then it should be possible to apply the facts profitably to the practices of transplanting. Perhaps the most obvious effects on lifting a tree are the damage to the root system and the disturbance of the soil surrounding the replanted tree. Root damage may be severe; inevitably all the root-hairs and much of the finer fibre are destroyed, and in addition where coarse roots spread extensively, they too are greatly reduced. Tree balance is upset to the detriment of the root; practically, the most important part of the root system has to be renewed after transplanting and consequently shoot growth is retarded. The disturbance of the soil likewise reduces root activity due to the interference with the continuity of the soil water system and its connection with the absorbing roots; a state of affairs only rectified after planting by the proper re-settling of the soil.

It is evident that transplanting is essentially a growth-restricting process, administering a more or less severe check to the tree. It can accordingly be utilised in private gardens as a means of inducing fruitfulness in over-vigorous trees. Provided trees are making really strong growth, an occasional transplanting carried out in early winter will increase the probability of early bearing. Only vigorous trees should be so treated, for cropping trees are generally adversely affected, since fruit bearing in itself is a sufficient check to growth. Too frequent transplanting should be avoided, for that may dwarf growth to a standstill, and as a rule very large trees are too drastically checked by replanting; in such cases root pruning or stem ringing are better and easier methods. The effects of transplanting on fruit production does not show until the second season, owing to the early season of fruit bud formation.

THE RIGHT TREE TO TRANSPLANT.

With increase in age and size of a tree the damage done to the root by lifting is correspondingly greater, and the check to wood growth becomes more marked on account of the initial

disparity between root and shoot. The severity of the check depends on the state of the tree and its surroundings ; in all cases the younger the tree the less it feels the effects of planting. A vigorous unfruitful tree on a free stock in a good soil feels the effects much less than a fruiting tree on a dwarfing stock in poor dry soil ; the former tree may only lose its over-exuberance, the latter may not recover from the effects. Wherever possible, maiden trees are most satisfactory, but older trees can be planted as cordons, for restriction of growth is desired here, and also for bush purposes in private gardens where careful individual attention can be given.

In the case of standard trees on free stocks, which it is not practicable to raise in their permanent quarters, planting should not be delayed more than three or four years. Frequent transplanting in the nursery has occasionally been advocated on the ground that, by restricting the root system, the tree will not feel the check on final planting out ; the essential thing with standard trees is to obtain a sturdy tree as soon as possible, and nothing could be more injurious or permanently stunting than frequent moving. Such practices are only necessary with trees, such as seedling walnuts, which are very sensitive to root damage and require frequent lifting to avoid a fatal check at planting out. The lifting of very old or large trees should only be attempted where conditions are excellent and restriction of growth desired ; it is a risky proceeding and far too much depends on the weather during the following summer.

THE PLANTING SEASON.

The time for planting may extend from September to April, but in normal seasons trees are hardly sufficiently dormant before late October, and the starting of growth makes planting after March hazardous. Once leaf-fall has occurred, planting is best started as soon as autumn rains have made the soil workable.

Soil conditions all favour autumn planting, for normally the soil is warmer, better aerated and works more easily than later ; these are the most favourable conditions for root growth and the root is able to take advantage of them. Another advantage is that the root system has the longest period for re-establishment before the shoot starts in the following spring. Natural settling of the soil round the replanted tree supplements firming-in, and soil consolidation is more effective under the compacting influence of winter rainfall ; in fact this soil settling effect of early planting may frequently be the most important consideration.

With advance of winter, soil conditions tend to deteriorate progressively, but it is still possible to seize upon dry periods when the soil is workable. It is better where possible to wait

for such opportunities rather than to attempt earlier planting under unfavourable conditions of tilth. Soil character and drainage are generally the factors which limit the time of planting. In sandy soils or well-drained loams, the soil readily dries during fine spells and planting is easily carried out at almost any time up to March; but late planting is a risky process in really sandy soils on account of the liability to drying out before the root can reach water deep in the soil. In the case of clay soils, planting is practically debarred in mid-winter by the poor tilth, and unless planting is completed early it often remains impossible until the drying winds of March bring improved tilth and aeration. This may be the best time, for the soil is broken to a finer crumb by frost action, and the moisture-retaining qualities of clay somewhat offset the risks of drought.

It is sometimes desirable for special reasons to lift trees whilst still in full leaf, and long before the ground is ready to receive them; trees thus lifted about August can be safely kept until planting time by stacking them and covering the branches with earth; the trees do not dry out and in due course the leaves fall naturally; this is commonly done in parts of U.S.A. where planting is cut short by winter freezing.

PREPARATIONS FOR PLANTING.

If fruit is to be grown under clean cultivation, it is often desirable to take a cleaning crop on the land in the season prior to planting. Where practicable a root crop, particularly potatoes, ensures cleanliness from weeds, and at the same time the manuring and cultivation put the land in good heart for planting. Where pasture is broken up for fruit, it is generally inadvisable to plant the first season; the trenching of the ground and the burying of the turf disturb the water system, and the trees are likely to suffer from drought.

It is impossible to generalise as to the cultivation which is necessary before actual planting. Whatever is done should be completed a month or more in advance in order that the soil may become sufficiently settled. In some cases, the cultivation given to the prior crop is considered sufficient preparation; in many others, trenching or subsoiling is regularly advocated. Only a few experiments have been devised to test the effect of trenching on the growth of fruit trees, and they have generally shown an insufficient improvement to justify the cost. It is doubtful if it would be possible to solve this problem experimentally under all conditions, and a decision must be guided by soil type and the effect of trenching on aeration and water supply. Trenching a light sand is unnecessary from the point of view of aeration, and it often increases the difficulties of water movement upwards; if it is undertaken, it should certainly be made

an opportunity for improving moisture retention by the incorporation of organic manures. Opening up clay improves aeration and induces the roots to penetrate deeper, but after a time the soil compacts and the deep roots may be suffocated by water-logging, thus severely checking the tree; where there is a poor drainage under clay, it is safer to discourage deep rooting. Probably well-drained soils of medium loamy texture respond most to improved aeration by trenching, and also soils which have developed a "pan" are likely to justify subsoiling before fruit planting.

Digging the holes for the trees should be done as immediately before planting as possible, preferably the same day. Otherwise a period of bad weather may ensue, during which the holes become water-logged and the soil panned at the bottom. It is advisable to choose fine open weather when the soil works well and readily breaks down to a fine crumb. The size of the hole should be rather more than the spread of the roots, and about a foot deep. In throwing out the earth, avoid mixing top and subsoil, particularly with clay, for the "dead" soil should be replaced at the bottom on filling-in. Where trees are to be planted for a grass orchard in existing pasture, it is important to dig out large holes, four to five feet across, for this is the only cultivation the trees receive. The second spit should be forked over and the cut-up turf either turned in, or placed roots upwards on the bottom of the hole.

TREATMENT OF THE TREE BEFORE PLANTING.

Trees are frequently obtained from a more or less distant nursery, and during the necessarily prolonged period between lifting and planting, proper care of the tree is most important. In cases where immediate replanting is possible, the check to growth is remarkably small, but where delay is unavoidable the check to the tree may be serious. The worst instances are seen in country markets where trees are sometimes exposed for sale with entirely unprotected roots; such trees are often irreparably damaged. The damage is mostly due to drying of the roots, which causes death and interference with new root growth. On receipt trees should be planted at the first opportunity, and in the meanwhile they require protection from further root drying by heeling-in the roots out of doors, except when the ground is hard with frost. The suggestion sometimes made that dry roots should be soaked in water just before planting can rarely be recommended: the damage is already done, and in the ordinary way the root will absorb sufficient moisture from the soil. With the exception of very late planting in dry soil, pre-soaking is likely to do more harm than good, particularly if frosty or wet conditions follow planting.

In recent years important researches have been devoted to the subject of root-trimming before planting, and it is now possible to speak with some confidence of its effects. Fibrous roots are much damaged by lifting, and mostly formed afresh after planting; the removal of fibre has little or no effect on subsequent growth and the operation is therefore superfluous. The removal of coarse roots reduces subsequent shoot growth considerably and to a less extent restricts further root growth. It seems clear that unless dwarfing of the tree is desired, as with cordons, root-trimming should be confined to the removal of damaged roots or those inconveniently long for handling. It will be realised that much depends upon the skill with which the trees are lifted from the nursery. It is worth remembering that coarse roots not only assist future growth, but their spread in the soil gives a useful anchorage to the tree before the system is re-established. The importance of root-trimming has probably been over-estimated, and it is at least desirable to recognise that no root pruning is better than too drastic a trimming.

PLANTING THE TREE.

The first point to decide is depth of planting, which depends principally upon the rooting habit of the variety and the soil character. It has been shown that root formation depends on soil moisture and aeration, but the root-stock variety determines where roots can grow on the tree. "Stooled" or "layered" stocks are able to produce roots from any part up to the graft union, but seedling stocks may be unable to form roots from the part just below the union. Scion varieties rarely root freely from their stems, and it is safe to say that the part near the union and above is the shiest rooting. It follows that the deeper a tree is planted, the more its root system is carried down into less aerated soil, and the greater the tendency to force new roots to develop higher up the tree. This infers that the capacity to tolerate deep planting or burying of the stem is greater in trees able to root from the stem.

The normal depth of planting is with the "union" just covered, which allows scion rooting to take place. Trees on "stooled" stocks, such as bush apples on paradise or pears on quince, can with advantage be planted a few inches deeper in light or medium soils; for this enhances vigour by increasing stem rooting, and by carrying the main root system down into moister soil. Conversely, shallow planting dwarfs growth by raising the root into water-deficient surface layers. In badly drained clays, even moderately deep planting throws the burden of rooting on to the shy collar region, and very deep planting, particularly of standard trees on seedling stocks, may kill the trees outright. In such situations shallow planting is essential,

for only the surface layers contain sufficient air to support roots : indeed it is sometimes only possible to grow fruit in clay by planting the roots on mounds above the general soil level.

Turning to the actual planting, firmness of the soil round the tree is the essential. It matters very little how carefully roots are arranged if the planting is loosely done. Sifting in fine soil and treading from time to time is not nearly enough : vigorous and heavy-footed stamping should be the minimum. In this connection the careful experiments of Spencer Pickering are most convincing, and his results have been confirmed by other research stations and by numerous and often sceptical growers. He advocated heavy ramming of the soil round the tree—"planting gate-post fashion," as one of his critics described it—and after trial with most kinds of fruit under many conditions of soil, climate and season, he was able to justify the practice by its results. All other considerations are secondary to real firmness of planting, the establishment from the first of the closest contact possible between soil and root. If a rammer is used, it is claimed that planting can be done with little regard to weather and soil tilth. The ramming process drives air out of the soil, and it should only be done in a narrow region immediately round the tree. For the same reason it is probable that ramming is dangerous on heavy clay soils, but in all other cases it seems to be satisfactory.

TREATMENT AFTER PLANTING.

Pruning or cutting-back is the most important question of after-treatment. There may be general agreement that a young tree must be headed back, but acute controversy rages round the question of the time of cutting-back. Should the tree be pruned at once, or should pruning be deferred for a year ? Unfortunately insufficient research has been devoted to this subject, and there is room for a more critical study of the factors governing the divergence in practice. Nevertheless several independent investigations have been carried out with apple trees in recent years and the results are similar in each case.

Branch pruning restricts root growth in the following season, but it invigorates the shoot and causes stronger wood growth. Therefore a tree pruned at planting regains balance by growth of the shoot at the expense of the root. An unpruned tree puts its energies into root growth, whilst the extension of the shoot is less vigorous than in the pruned tree. Deferring pruning for one year after planting results in a better rooted tree, but at the expense of a check to shoot growth.

The practical outcome depends on local conditions and requirements, and it is impossible to generalise. Immediate pruning suits many conditions, for it invigorates shoot growth

early in the first season, at a time when a check to growth may be serious to the tree. The choice seems to lie between a well-established root in the unpruned tree and a vigorous shoot in the pruned tree. Where shoot growth is likely to be much restricted, it appears inadvisable to defer pruning, as for example in the case of sandy soils or of trees on very dwarfing stocks. Where growth is free, as on "strong" soils or with young standards on vigorous stocks, early anchorage may be more important, and pruning may be deferred. Similarly where over-vigorous trees are transplanted with a view to hastening fruiting, cutting-back is superfluous and merely counteracts the effect of lifting.

As regards lateral pruning, a recent investigation has confirmed growers' observations that young trees allowed to feather in the nursery make a sturdier stem and larger root system. Disbudding the main stem and removing lateral growths tends to restrict the girth of both stem and roots. If young standards are allowed to feather their main stem for a few years after planting, sturdier and better rooted trees will result, and conversely by disbudding the stems of maiden trees girth restriction can be attained.

Following planting, every effort should be made to conserve moisture, for drying out is the chief risk the first season. The surface of the ground is hoed to prevent evaporation, and this is frequently supplemented by a mulch of strawy manure round the trees. With young trees in grass, the soil must be kept cultivated for several feet round the tree until eight to ten years old. Grass cover restricts root growth and is most injurious and stunting to the growth of young trees, particularly in the drier parts of the country.

Lastly, since fruit production is a dwarfing process, newly planted young trees should not be allowed to crop. It is much better to remove the flowers than to thin off the young fruit, for blossoming and fruit setting are nearly as much a drain on food reserves as growth of the fruit. Flower removal stimulates wood growth, but fruit thinning has much less influence since rapid growth has ceased at the time when thinning has become possible.

In conclusion, whilst it is recognised that these cultural practices are either common knowledge or the subject of acute controversy to the alert grower, the aim has been to show that sound practice rests on an understanding of tree growth and response. There is room for a greater appreciation of the facts of fruit-tree physiology, and for a recognition of the failure of rule-of-thumb methods even in the treatment of a single plantation. The differing needs of the individual tree should be the view-point, and that is only possible with a fuller understanding of the way the tree lives and grows.

THE SHIRE HORSE, 1878-1928

IN 1928 the Shire Horse Society celebrated its Jubilee. Few, if any, of our Breed Societies possess a better record, and it may safely be said that, in spite of many adversities, the Old English Cart Horse still holds his own to-day.

Horses for agricultural purposes date back with certainty to the time of William the Conqueror, who showed great interest in their production. Many of our sovereigns since his time until now have been breeders of heavy horses. Queen Victoria owned pedigree Shires. King Edward VII had a famous stud at Sandringham, and was the breeder of two London Show Champion mares; namely, Dunsmore Gloaming and Solace. King George V also breeds Shires, and among the animals bred and owned by him is his famous dual London Champion stallion Field-Marshal V. His Royal Highness the Prince of Wales also owns some Shire mares on his new farm at Lenton, Nottingham, from which, it is understood, he intends to breed. Many of our nobility have always been interested in the Shire horse, and a perusal of the membership list of the Society will show that many still are active supporters of the breed.

ORIGIN OF THE SHIRE HORSE SOCIETY.

On March 4, 1878, at a meeting of the London Farmers' Club, at the Caledonian Hotel, Adelphi, Mr. F. Street, Somersham Park, Hunts, read a paper on "The Breeding, Rearing, and Management of Cart Horses." Mr. John Brown, of March, Cambs, was in the Chair, and in introducing Mr. Street said: "Science and steam and machinery have done much for us of late years. I trust they have something good in store for us; but we have not yet arrived at a stage at which we can do without that useful animal, the cart horse! That animal is an important factor in the economy of the farm, and I am quite sure it is worthy of the consideration of the Club."

The reading of the paper was followed by a discussion. Immediately afterwards another meeting was held, when it was decided to form a Society for the publication of the pedigrees of Shire horses. The importance of this step can hardly be exaggerated, as it has added materially to the value of the breed.

Among those present on that occasion who sympathised with the suggestions were: Professor W. Pritchard, Major Dashwood, Captain Heaton, Messrs. James Howard, M.P., Charles Howard, F. Dun, J. K. Fowler, T. Duckham, Geo. Street, T. Bell, C. S. Read, M.P., P. Phipps, M.P., John Brown, who presided, and F. Street.

Mr. Street said that he was glad of the opportunity of placing

before his fellow-breeders the importance of a Stud Book for Shire Horses. He thought that it would be unwise to let the present chance slip of forming a Society for the registration of good Shire-bred stock. The feeling was shared by many in Cambridgeshire and Lincolnshire.

The following resolution was moved and unanimously adopted :—

“That it is desirable to form an Association for the establishment of a Stud Book for Shire-bred Horses.”

A provisional committee was then formed to carry out the foregoing resolution.

The next meeting was held on April 1, 1878. Letters were read from Lord Dunmore, who wrote from Windsor Castle, warmly approving the project. Sir Walter Gilbey wrote to Mr. Street :—

“I was pleased to see the part you took at the late meeting at the Caledonian Hotel for the purpose of establishing a Stud Book for our breed of big heavy draught horses, the necessity for which cannot be questioned. At the same time I confess to being sorry that any new name should be coined to give it a title when that same breed has been for half a century or more distinguished by the name of ‘The Shire Horse’—an honourable distinction which I think should be perpetuated by calling the book the ‘Shire Horse Stud Book.’

“When you reflect that the Clydesdale and the Suffolk have each their own Stud Book, and that both are in reality English cart horses, and might justly be included in your proposed list, when also you remember that these Shire horses are used for many other draught purposes besides cart work, and lastly, that this subject concerns breeders in nearly all the counties in England, who have, like myself and friends in this neighbourhood, accepted and styled our animals as the ‘Shire Breed’ (and from which counties members may be expected to join your Association), I hope the newly appointed committee, or the members who are to be appointed, will not hastily commit the Association to a name which is inappropriate, and that they will at least give time for another meeting to discuss so important a point.”

Sir Walter Gilbey’s letter was written as a protest against the adopted title, “The Old English Cart Horse Society.”

THE SHIRE HORSE SHOW.

The Society has done good work for the breed by means of its annual shows. These shows have brought together the best horses in the country, and have been the most effective means of publicity for the breed conceivable.

The Council has given very generous prizes to exhibitors and breeders, and by so doing has encouraged everyone, from the

one mare owner upwards, to aim at breeding a "London" winner. On more than one occasion the supreme championship has been won by a tenant farmer, and many notable animals shown by others have been bred by tenant farmers.

Recently the Society has gone beyond the bounds of breeding stock (stallions and mares), and has included in its prize list classes for the finished article, viz. Commercial Geldings. These gelding classes have proved to be a great success, and immense interest is taken in both the geldings in hand and the yoked geldings. Horses for the "Commercial Classes" come from all parts of the country, and form a very impressive sight as they march nobly round the ring with their wagons.

Weight pulling competitions have also been introduced with remarkable results.

WEIGHTS PULLED.

Three official tests resulted as follows:—

1. A pair of geldings owned by the Liverpool Corporation pulled a load of 18½ tons on the granite setts in the Liverpool road, Islington.

2. 16½ tons on the wood blocks inside the Agricultural Hall.

3. 6 tons on the tan in the ring. These tests were carried out under normal conditions of work, with two horses in tandem formation, yoked to a 2½ ton dock lorry.

The classes for Shire Horses have been a distinctive section of the Royal Agricultural Society's Show schedule since 1883, when at York provision was made for stallions and mares entered or eligible for entry in the Shire Stud Book, and finally at the Norwich Meeting of 1886 the omission of the words "or Agricultural" placed the Shire on an equal footing with the other recognised heavy breeds. Equality of treatment had been urged immediately after the Metropolitan Show at Kilburn in 1879, at which the Breed Society—in the first year of its incorporation—had offered four Champion Cups. Half the resulting entry were described in the Catalogue as "Shire-bred" and the heaviest type—suitably styled Dray Horses—carried off the palm in that showyard.

It is appropriate that the dates of the Royal Meeting at Nottingham should have synchronised with the fiftieth anniversary of the Shire Horse Society on July 11, 1878, and more especially as, from 1879 onwards, it has so closely allied itself with each consecutive Royal Show. The offers of the Cups and Prizes supplemented from 1891 by Gold Medals and prizes to the Breeders of the Champion Stallions and Mares bring the contributions of the Shire Horse Society to the Royal schedules to a cash equivalent of £3,500. This total is exclusive of any special propaganda scheme such as the successful organisation

and wonderful exhibition of over 20 Shire-bred Geldings at the Royal Show at Cambridge in 1922.

But the encouragement to the Shire Breed has not been restricted to the Royal Shows. Some 250 Country Shows and Parades co-operate by offering the Society's Gold, Silver and Bronze Medals. The measure of encouragement is based on the reciprocation extended by the co-operating Society. The offer of £100 in prizes secures a Gold Medal, or its cash equivalent, while the smaller Shows can claim Silver and Bronze Medals according to the scope of their schedules. The amount distributed since the initiation of the schemes (Parades in 1887 and Affiliated Shows in 1892) and excluding the Royal, has been a sum not far short of £30,000.

In 1928 the Society broke fresh ground by extending its encouragement to the northern section of the United Kingdom by the provision of separate classes for Shires at the Highland Show at Aberdeen.

Obviously the chief factor in its activities has been its own Spring Show, which, launched in 1880, has been held without a break each Spring and therefore reaches its "Jubilee" at the Royal Agricultural Hall, Islington, in February, 1929. The progression from the modest schedule of £533 to that of £2,185 in 1928, with a grand total of £78,450 awarded at the 49 shows is noteworthy. The full details of the foregoing, and other phases of the Society's activities are embodied in the *Jubilee History* which was issued immediately antecedent to the 1929 Show.

CART HORSE PARADES.

The various Cart Horse Parades up and down the country will show anyone who may be interested, what a Shire Gelding really is.

In Regent's Park on Whit Monday there are to be seen the best part of a thousand heavy horses, yoked in carts and lorries. This "Parade," initiated by the late Sir Walter Gilbey, is the function of the year for the grooms and carters.

The horses are speckless, and harness too, for prizes are given for the best-turned-out exhibits. The wonderful schemes of decorations on horses and wagons are pleasing to the eye; and as nearly every vehicle is filled with the carters' friends and relations, dressed in glad attire, the procession vies closely with that of the Lord Mayor's Show.

Liverpool also is very proud of its May Day Parade, and it is doubtful if one could find a better collection of big Shire Working Geldings anywhere in the world than the Liverpool display.

Manchester, Lincoln, Doncaster and other big towns and cities have also their magnificent and useful shows, which do so

much good both for the breed and the care of the animals in work and in the stable. Such exhibitions bring home the words of Kipling :

"The game is more than the players of the game,
And the ship is more than the crew."

THE JUBILEE YEAR POSITION.

The Society has for this Jubilee year Sir Walter Gilbey as its President.

Sir Walter has for years been untiring in his work for the Society, and it is, to a great extent, thanks to his indomitable nature, that the Shire horse still flourishes throughout the land.

The late Sir Walter Gilbey is always associated with the foundation of the Shire Horse Society ; and many remember the energy and determination with which he worked, until the Society was an acknowledged fact.

Scores of other names—if space permitted—could be mentioned, as pioneers, architects, engineers, and workmen, all of whom have well earned the Society's Distinguished Order of Merit.

A reference to Volume I of the Shire Horse Stud Book reveals the fact that horses registered in it date back to 1820 ; so that for more than a century the pedigrees of these "Giants of Labour" have been carefully guarded.

The "Shire" of to-day—which is no fluke, but the product of careful scientific reasoning—possesses more weight than the horse of fifty years ago.

This gradual evolution has been brought about by careful mating, by which the weightier animals have been fostered and the lighter ones shelved.

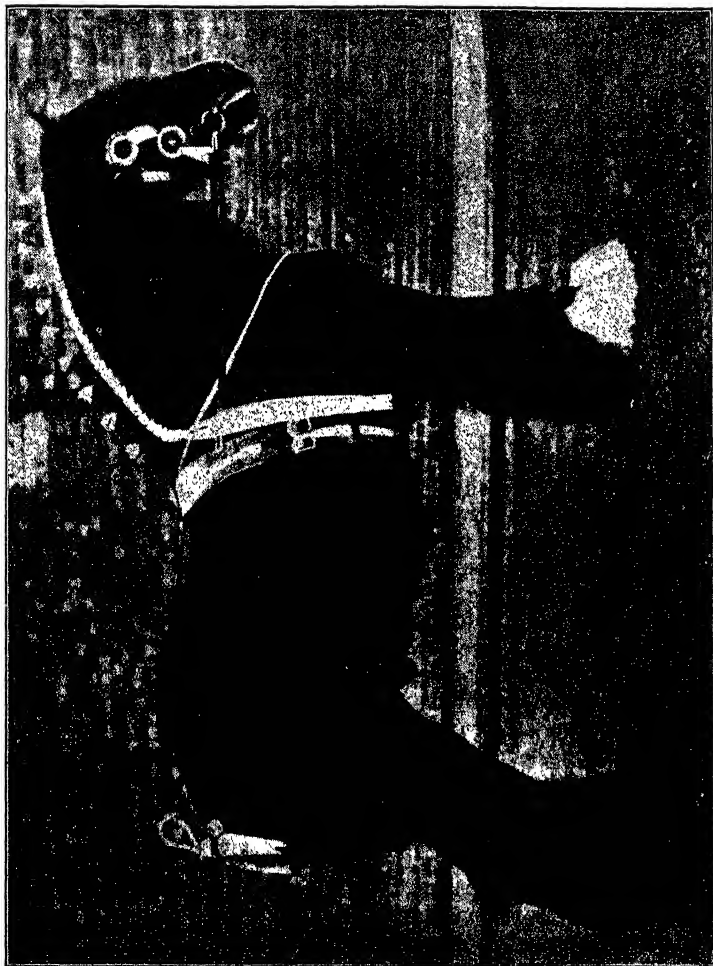
"Keep the lorry in view" is a well-known slogan amongst the breeders, and with this motto ever blazoned before their eyes, they have evolved weight. "Weight" means "avoirdupois" ; for weight moves weight.

Not only have the Shires of to-day big tops, but they possess big legs to carry them, giving uniformity of weight both above and below the shaft line—features so essential for the starting and pulling of heavy loads.

Some years ago, coarse, curly-haired legs were not an uncommon sight ; to-day, they are rare exceptions in the pedigree animals ; and a visit to any Shire Horse Show will verify this statement. "Quality" is now an outstanding feature, but not at the expense of weight ; for the Shire of to-day possesses both weight and quality, together with gaiety and activity—qualifications that make him so agreeable as a cheerful worker.

The Working Geldings, such as one sees in all the large towns, filling the shafts of railway lorries or municipal carts ; the pairs,

threes and fours so often seen in the brewers' drays, are the result of careful breeding on the right lines. The majority of these horses are by registered Shire stallions ; and many of them



[Sport and General.
MR. J. MORRIS BELCHER'S CHAMPION SHIRE STALLION, "EATON PREMIER KING."
Photo by]

are out of registered Shire mares. When pedigree produces the commercial article, the particular breed society may congratulate itself that its work is sound ; when pedigree is purely used for intensifying fancy show points—that are not of practical use in the commercial animal—the breed society encouraging such is

doing harm to its own breed. Generally speaking, these geldings are over 17 hands in height, nearly a ton in weight, and of a build that renders them capable of putting the whole of their colossal weight into the collar, without friction, thus constituting an ideal and economic means of traction for short journeys.

The Society aims to-day at breeding horses which when mature approach to the following description:—17 hands high, alert, with head majestically carried on muscular, slightly arched neck; sloping shoulders; strong short back, with well-sprung ribs and long quarters; girth large, with plenty of thoracic accommodation for heart and lungs; chest broad, and middle deep; legs well set under the body, not too near, but not at the corners; arms and thighs long and muscular; knees flat and deep, hocks broad in front, deep behind, strong and clean; canon bones short, strong in front of the leg; clean-cut sinews, well defined and flat behind the leg; pasterns strong and sloping but not too long; feet large, solid, and deep, with strong quarters, clean coronets, and set straight without twist; hair straight and silky, not coarse or curly; movement level all round; straight and true with boldness of carriage; soundness in wind, limb and eyesight.

The Shire is a very docile animal and amenable to kind handling; the colts are easily broken in for work, and the mares make good, kind dams. They are long-lived, and a source of pleasure as well as of income to their owners for years.

It is not uncommon to hear of mares that are well into their twenties, still breeding. Often has the Shire been spoken of as "The Rent Payer" for the tenant farmer, and not without reason, for many a prosperous farmer will tell how he ascribes his initial success in the venture to the breeding of Shire horses. The method adopted by many farmers is to break-in their colts when two years old, from which time they earn their own keep; work them on the farm until they are five or six years old, then sell them to the gelding buyers for town work. The horse is appreciating all this time in value, and thus leaves a handsome margin of profit for the breeder.

The Shire Horse Society, let me repeat, has been the central power or agency in initiating, organising and promoting the great work of making the modern Shire breed what it is. As the movement extended and prospered, the influence of the Society widened and gained in effective activity, and this advancing from strength to strength proceeded with reassuring consistency, until the advent of the motor-car and its larger brother the motor-lorry. But the coming of the self-propelling vehicle was only contributory to the discomfiture of the great cart horse. There were other adverse influences. The War directed attention towards mechanical contrivances and away from the horse, while

it so happened that the industry of farming fell upon evil times, just at the juncture when things might have righted themselves after the turmoil of international hostilities. A careful survey of the position, therefore, reveals unmistakable and ample causes for the unfortunate experiences of recent years. What, precisely, the future of the breed and the economic importance of Shire breeding to the farming interest may be, it would be difficult to say and unwise to predict. It cannot be without hope, however, since there will be a market for the best class of draught horse as long as industry and trade continue.

The breed society has been the focusing institution, but the good work done for the breed in its name owes much to the enterprise and skill of individual owners and breeders. It is fair that reference should be made in this Jubilee Year of the Society to the various collaborating factors throughout the country. The pioneer work of the early improvers and organisers was carried on, developed and consolidated by successive generations of supporters, among whom landowners and others of independent means were prominent and extremely helpful. The part played by the tenant farmers cannot easily be exaggerated, but the most enthusiastic of them will agree that the support which they and the interests of the breed, received from breeders and exhibitors less directly dependent upon the land or the pursuit, was of inestimable importance. At one time it was the custom with many owners of estates to include a stud of Shire horses among the stock maintained, and those whose memory goes back over thirty or forty years will recall with gratitude, perhaps mixed with a tinge of regret at its discontinuance, the active part which supporters of wealth and position took in encouraging in the most effective way possible, the welfare of the breed and all that its prosperity represented.

The importance of Shire horse breeding to the serious business of farming during several decades, when aid of the kind was much needed, will be generally acknowledged. The history of the modern Shire shows that the finest class of draught horse can be bred from mares included in the ordinary working teams. Many of the most famous stallions and mares emanated from farms where no supplementary mares were kept, where every mare had to earn her living in collar work. Hard farm work may be an obstacle to success in the showyard—although there are many cases on record in which animals have scored even under this handicap—but actual results prove it to be conducive to success in the breeding of show animals rather than the reverse. It was to this healthy association of suitable work and breeding that the prominent and profitable part acted by tenant farmers is largely due. The same success could be attained to-day under similar conditions, that is that a market existed.

approaching in generosity and magnitude that obtaining in the pre-motor and pre-War years. In this connection it is appropriate to recall the annual sequence of private or joint stud sales which brought followers of the breed together from all parts of the country, and were productive of financial results that served to give an impetus to breeding that spread throughout the counties and in due course was discernible in the multiplication of studs and the progressive popularity of the London and other shows. The co-ordination between tenant farmers and land-owners, spontaneous rather than studied, was effective of valuable service for the breed, which the Shire Horse Society was efficient in cementing and encouraging.

There may be noted two senses in which stud owners, through the breed society or at its instigation—in any case there was general collaboration—rendered timely and lasting service to the business of horse breeding. The first was the organised provisions introduced for detecting and eliminating hereditary disease or unsoundness. In its early days the breed suffered considerably from disorders of one kind or another, and its progress was retarded in consequence. There was but one way of surmounting the obstacles to improvement and this the Society, with the consent of owners boldly adopted. Severe veterinary inspection was imposed and the policy was carried out with such vigilance and impartiality that in course of years the number of animals that failed to survive the ordeal in the veterinary paddock at shows dwindled pleasingly to meagre proportions. Veterinary science applied with prudence to the Shire breed has accomplished remarkable results and conferred benefits that it would not be easy to compute. The breed society was the "Clearing House" in the development of this scheme and the task was formed with immediate and enduring results of the utmost importance.

Closely akin to improvement in the health and soundness of the breed has been the notable change in the quality of endurance. The best strains of the breed have always been long livers and lasting workers, but the proportion of stayers in years and work—and also in the strenuous business of the showyard—has increased progressively since veterinary inspection was adopted as a compulsory condition for show animals. The records of the London Show testify that prominent animals of the breed can reappear at Islington year after year for a decade and still defy the detection of anything amiss with limb or body. The work accomplished affecting the health, utility and durability of the Shire horse in the fifty years' operations of the Society and its members, is a fine record of organised, voluntary measures for the attainment of a great object.

The other feature in the work of the Society to which special

reference may be made is the system of giving prizes for breeders at the London Show as distinct from the ordinary prizes open to exhibitors. The idea of breeders' prizes may or may not have originated with the Shire Horse Society, but at no other show has the procedure been adopted with equal liberality and, therefore, with equal effect. Tenant farmers have been greatly encouraged and aided by the stimulus of the London prizes. Those of them who were fortunate enough to be successfully represented at Islington by animals they had bred and sold, usually at handsome prices, valued the money that came to them through the enterprise and skill of others. They would not in any case have complained of the ordinary prizes going past them, for they had already been paid on generous terms and had incurred no expense in preparing the animals for the show, but they rejoiced at, and were encouraged by, the reward that came to them through this indirect and wholly admirable channel.

Numerous local horse-breeding societies have been instrumental in promoting and consolidating the success of the breed. The fact that this class of work has been altogether of a voluntary character redounds to the credit of the breeders and the qualities of the breed. Perhaps in regard to no other breed has the principle of local co-operative effort been more widely adopted or effectively exemplified than in the case of the Shire horse. The scheme of district societies instituted in more prosperous days still continues on a revised scale suitable to the times and there can be no doubt about the wisdom of retaining and utilising the machinery bequeathed from former generations for making the breeding of the finest type of horse an organised and successful pursuit, independently or, still more important, as a complementary section of the normal farming routine.

Major-General Sir John Moore, in his excellent paper read at the Annual Congress at Newcastle-on-Tyne, September 4, 1928, says :—

"It is convenient to take industrial and agricultural horses together, as the farm is the breeding ground of the horse used in commerce and industry ; and the fortunes of one are bound up in those of the other. It is also to our draught breeds of horse that my paper chiefly applies.

"I have thought it expedient to show at some length the low ebb to which the breeds of world-famed draught horses have drifted, in the hope that by inviting public attention to a situation that, from a national aspect, is undoubtedly serious, an interest may at the same time be awakened which will repair the injury received. It takes very little to influence horse-breeding, the margin of profit in that industry being as a rule small and sometimes conspicuous by its absence. I remember many years ago

the fear of a set-back to horse production for our home market which the invention of pneumatic-tyred bicycles created in Western Canada. What the bicycle threatened, the motor-car and motor vehicle accomplished. Yet no one would regret the advent and the progress of motor transportation in all forms.

"There is, however, no getting away from the fact that the motor age is expensive, and the employment of motor vehicles in business and in commercial pursuits adds to the cost of commodities and tends to keep up that high cost of living which hits the community so hard. I think most people, whether they are business firms or simple consumers, would welcome means whereby substantial economy could be reflected on the community and looseness of expenditure curtailed in every way.

"With this end in view, and economy being the keynote of my paper, I have obtained, through the kindness of corporations, municipalities, and business firms, statements of comparative costings of horse and motor transport, which may be taken as an accepted fact—that for ordinary trade purposes of towns and cities, viz., in distributive trades, manufacturing trades, cartage of goods, market gardening, and in the work of local authorities, the horse is much cheaper than the motor in a daily computation of work and working within a radius of from four to six and sometimes eight miles. . . .

"My reading of the London traffic figures leads me to the conclusion that there is a recovery of position of the horse in London's industrial activity since the year 1926, especially in the heavier breeds of horses. The best comparative estimation of horse versus motor commercial traffic in London is to be obtained in the police cross-river censuses, where horsed vehicles more than hold their own with motor commercial vehicles.

AN ECONOMIC PROPOSITION.

"What then should be the practical issue of proved economy in the use of the horse as a commercial and industrial factor on the one hand, and a bed-rock state of horse-breeding on the other? Surely the promotion in our agricultural districts of an adequate supply to meet industrial requirements is indicated, and that supply to be of the best our country can raise. If demand of the right type for economic usage continues healthy, agriculturists will not be slow in responding to the call, and breed societies, acting in conjunction with the Ministry of Agriculture, may be relied on to maintain the high standard of quality in the respective breeds?"

Shire breeders have already realised the fact that there is a growing demand for the heavy draught horse, and are breeding more. Societies are busy selecting suitable stallions for their respective districts for season 1929.

Animals, both commercial and breeding types, are selling readily all over the country.

The new Stud book contains many more entries than last year's book.

Such facts spell encouragement to the breeder, and mean long life to the Shire Horse!

Years ago when the railways were first introduced into this country, the death-knell of the heavy horse was sounded throughout the land; he however survived the onslaught, and what is more, the demand for horses of his type was greatly increased.

He became an absolute necessity to the railway companies, for the loading and unloading of their goods; so that large purchases of these horses were made by the railway companies, and are still made by them.

Then came the motor-lorry, the tractor, and all the many forms of mechanically propelled machines, which again spelt death to the horse; but in spite of all, he still lives, and has a large field of occupation in which he is—*par excellence*—the right and only economic proposition.

W. H. FORSHAW.

Slythhurst,
Ewhurst, Guildford.

THE CUMBERLAND AND WESTMORLAND SHORTHORN.

SHORTHORN history is punctuated by a series of landmarks which at some time or other have acquired national significance. In the main these landmarks have concerned the types developed by distinguished breeders, so that there is a succession of names like Colling, Booth, Bates, Cruickshank and Duthie, which are at once outstanding and all of which are equally assured of immortality in the annals of breeding. The extensive distribution of the Shorthorn type has also tended to associate with the breed various counties or districts which through a variety of causes have developed a type of animal with distinctive characteristics. Such an occurrence is almost inevitable, by reason of the influence of environment coupled with the different interpretations placed by breeders upon the various commercial requirements in their stock. Thus the preference for red cattle has given to Lincolnshire a distinguished section of the Shorthorn family. Beef has been particularly identified with the aims of Scottish breeders, so that "beef" or "Scotch" Shorthorns are held to be almost synonymous. At the other end of

the scale it is perhaps difficult to associate the milking strains with any particular locality, though the "dual-purpose" standard has been definitely associated with the cattle of Cumberland and Westmorland.

The pre-eminence of the Shorthorn cattle from the two north-westerly English counties, judged from the standpoint of the dual-purpose dairy animal, is abundantly supported by the long line of successes in the show-ring and the public esteem in which they are held. It is all the more interesting, too, from the fact that the breed was not originally identified with these two counties. Sandford in a manuscript description of Cumberland, dated 1675, says that in the district around Naworth formerly were "pleasant woods and gardens, ground full of fallow deer, feeding on all somer tyme; brave venison pasties, and great store of reed (red) deer on the mountains; and white wild cattel with black ears only, on the moores"; etc.

It is not possible to trace the disappearance of the white wild cattle, nor yet to explain the exact association of the succeeding races of cattle with the two counties prior to the Shorthorn invasion. Bailey and Culley in the course of their survey on the agriculture of Cumberland, reported to the Board of Agriculture in 1797 that "the cattle are a small breed of long-horns, with a few exceptions of the Galloway breed intermixed, particularly along the coast from Whitehaven to Carlisle. This breed of longhorns is not distinguished by any peculiar good qualities, which is not to be wondered at, when it is considered that, probably at this time, there is not one person in the county that pays any attention to its improvement. . . . The long-horned and Galloway cattle are probably the best adapted to the county of any." Of the Westmorland cattle at this same period, Pringle in the Westmorland survey, stated: "They are long-horned, very much resemble the Lancashire breed, and when kept to a proper age, grow to a great size. . . . To judge from those of all ages in the pastures at Lowther Hall, they are excellent feeders, and possess in an eminent degree the very desirable property of laying the fat upon their backs and other valuable parts. The heifers and barren cows, if well chosen, are confessedly good thrivers, and are in general request among the graziers of Yorkshire and Lancashire."

Judging from the above reports it is fairly obvious that the Westmorland breeders were in possession of the better cattle. This is moreover supported by other evidence. Lawrence in his *General Treatise on Cattle* (1805) asserts of the longhorns, that "they were formerly called Lancashire longhorns, that county, Westmorland and Cumberland, being the earliest and most considerable breeding districts; from whence they spread southward. . . . The neck of land containing Lancashire and

Cumberland on the western, and Yorkshire, Durham and Northumberland on the eastern coast, has by a curious singularity, been the parent country of both the long and short-horned cattle." Youatt (1835) mentions that the longhorns "used to exist in their greatest purity" in Westmorland, and if some counties are destined to stand out in the history of livestock breeding more than others, then Cumberland and Westmorland must surely have a worthy record, irrespective of the exact type of animal concerned. Despite the disparagements of some of the earlier writers, it is a definite fact that in pre-Shorthorn days "Sir Thomas Glasby had selected from Lancashire and Westmorland a herd of the best shaped (Longhorn) cows. Certain descendants of these were afterwards purchased on the banks of the Trent, and introduced into Warwickshire, by Mr. Webster, of Canley (1730-60). . . . Bakewell commenced his operations with Canley cows, and a bull from Westmorland called 'Twopenny'."

It is worthy of record, too, that the dual-purpose ideal was apparently recognized in Westmorland at the end of the eighteenth century, for Pringle, in the Westmorland survey mentioned earlier, stated that "there are few counties in England, in which there is no great manufacturing town, where more milch cows are kept in proportion to its size, and where the produce of the dairy forms a greater part of the profits of the farmer. It may be naturally supposed that he is particular in the choice of his cows, and that they are remarkable for giving a great quantity of milk. Neither supposition, however, is founded in truth. The farmer keeps just such cows as he has bred, and they by no means yield so much milk as would be expected from those of the Dutch, or even the Scotch breed (Ayrshire), upon a pasture of the same quality. . . . Cows in the county are kept for the sake of making butter, of which great quantities, of an excellent quality, are sent yearly to the London market in firkins of 56 lb. net at from 30s. to 35s. each."

The displacement of the Longhorns by the improved Shorthorn started at the beginning of the nineteenth century. Longhorn classes were provided at the Westmorland local agricultural shows until 1845, while at the Lunesdale show in 1844, there were three Longhorn classes with 16 entries. In Cumberland, the Keswick Agricultural Society continued its Longhorn classes until 1870, when the county came into line with Westmorland with Shorthorn classes only, with the exception of some for Galloways in North Cumberland. Shorthorns were recognised by the Kendal Agricultural Society for the first time in 1820, though the breed had been introduced in the district at least ten years prior to that date. The Penrith Agricultural Society, which was founded in 1836, only provided classification for Short-

horns and Galloways from the first, and classes for the latter were discontinued in 1860.

It is of historical importance to recognise that the disappearance of the Longhorn was the result of a system of replacement and outcrossing with improved Shorthorn "blood" combined. It was natural that the introduction of a new type should be attended by suspicion at first, for the climate experienced in the two counties, which are amongst the wettest in Britain, coupled with the high altitude of many of the farms, made it imperative to pay strict attention to the factor of hardiness. Once the good qualities of the Shorthorn were appreciated, the bulls of the breed were extensively used until the Shorthorn type was universal throughout the two counties. The foundations of many of the herds were varied. Thus in "The Farming of Westmorland" (*R.A.S.E. Journal*, 1868), Webster mentions that "considerable quantities of Galloway, Highland, Irish and Dutch cattle were shown at the great fairs of Appleby and Brough, and these spreading through the county, led to crosses with the Shorthorns, which raised useful stock for the high-lying farms." It is equally interesting to mention that those breeders who were the principal prize-winners at the early agricultural shows in the Longhorn classes, were just as successful in the show ring when they changed over to the Shorthorn type. This is particularly emphasised in the records of the Kendal and Westmorland Society, which was founded in 1799. These records also seem to indicate that some holdings, irrespective of their tenants or type of stock, have a definite superiority as stock-breeding farms, and the same features are true of many Cumberland breeding farms.

Lord Lonsdale was probably the first person to introduce the Shorthorn to Westmorland, for at Charles Colling's sale in 1810, he purchased three heifers and a bull at a cost of 272 guineas. "Beauty," calved in 1811, was the first Westmorland-bred pedigree Shorthorn, being entered in Vol. I of Coates' Herd Book in 1822. The first Lowther Shorthorn herd was apparently dispersed in 1818, and a Mr. Atkinson, of Temple Sowerby, bought five females and a bull, though this breeder did not keep the pedigree records. In the south of the county, James Harrison, of Lowfield, Kirkby Lonsdale, Wm. Ellison, of Sizergh, Kendal, and Daniel Wilson, of Milnthorpe, competed for the Shorthorn prize at the Kendal Show in 1821, while two years later Shorthorns were on offer for the first time at the Kendal Spring Fair, and at which they sold well. At Harrison's sale in 1839, prices ranged up to £50, which was paid for an eight-year-old cow. Ellison's herd was handed down to his son and grandson in turn, and ranked as one of the best in the county until dispersed in 1867. Other early breeders in the south

of the county were R. Morton, of Skelsmergh Hall, whose first bull "Chance" was registered in 1827, and Thos. Scott, of Green Head. In the north of Westmorland, a second herd was established at Lowther in 1825, while in 1837, J. Buston, who had commenced breeding in 1825 at Dolphenby in Durham and who had 44 entries in the second volume of Coates' Herd Book, transferred his herd to Wharton Hall, near Kirkby Stephen. It was this breeder in particular who laid the foundations for many other herds which subsequently have done much to popularise the cattle of these two counties. Among these herds were those of Robinson of Skelcies, Unthank of Netherscales—a famous breeder—Metcalf of Ravenstonedale, Thompson of Kirkby Stephen, and R. Nicholson of Low Row—a descendant of whom created Shorthorn history at Gilt. It should be stated that in the meantime the Lowther herd claimed much renown for the high level of the breeding stock. Some of the best of the early sires in the herd book of pure Colling "blood" were used and the close proximity of Lowther to the Cumberland borders led to a considerable improvement in the cattle of the district by the use of Lowther bulls. Thus Wm. Parker, who farmed at Carleton Hill, Penrith, was led in his *Reminiscences* (1887) to remark "in regard to the sires of former days in Cumberland, choicest and most valuable of all was unquestionably Gainford 2044 of the Cherry tribe, purchased from Col. Cradock for Lord Lonsdale, his tenantry of Lowther having free use of his services. It was no uncommon occurrence to find at the local agricultural show at Penrith half a dozen bulls by him, viz. Eden 3689, a celebrated prize-taker, Sir Thomas Newton, Tom Boy, The Colonel 3428, Prime Minister 2456, The Earl 5437, etc., all capital animals—good stuff with plenty of it. The cows and heifers, his produce, also numerous, equally grand and of first-rate quality."

Cumberland also had its quota of breeders of Shorthorns who distinguished themselves in the first half of the nineteenth century. In the west, there was Mr. Curwen, of Workington Hall, who established a celebrated herd of the pure Colling strains, and who made it his business to popularise the Shorthorn among the tenant farmers of the district. The impetus given to Shorthorn breeding by the Lowther purchases in 1810 led to others introducing cattle direct from Durham. In "Farming of Cumberland" (*R.A.S.E. Journal*, 1852), Dickinson records that "it would be reckoned invidious to attempt to enumerate the breeders of Shorthorns here, there being so many who have attained celebrity and been successful. . . . The prizes offered by the Agricultural Societies keep up the spirit of enterprise among the breeders; the proved utility of the stock seems to set all competition of other breeds at defiance,

and they now appear after the lapse of a very few years, to have become the staple stock of the country. It is pleasing to record the enthusiasm of the present breeders of Shorthorns, in procuring from time to time, by clubs and joint stock companies, or single-handed, the very best young bulls they can meet with among the first stocks in the Kingdom, almost regardless of price, if the cross of blood promise success. The neighbourhood of Penrith stands pre-eminent for the number of high-bred stocks, but there are many of first-rate quality in various parts of the county." It is significant that even at this comparatively early date the Penrith district had acquired a local reputation for its stock, which incidentally still persists. The reputation of a breed and district is a great asset, and the more so as when it is consistent over a long series of years. There was in existence at the time that Dickinson compiled his essay one of the purest-bred herds in the country, in that of Mr. Saunders of Nunwick Hall—a herd which subsequently gave rise to others which were even more prominently before the public eye.

It is fitting to enquire at this stage as to the respective aims of breeders in these counties just before the middle of the nineteenth century. One fact stands out remarkably plain in the historical records available, and that is the breeders were beginning to appreciate the significance of combined feeding and milking qualities in one and the same animal. This indeed was the avowed aim of a Mr. Ferguson, of Harker Lodge, one of the earliest Cumberland Shorthorn breeders, who had purchased three highly-bred Colling cows in Favourite, Elvira and Kate, from a Mr. Binns, of Lancaster, in 1819. These were all regarded as typically dual-purpose, while Kate in particular had a remarkable capacity for milk and butter production. In the words of her owner, "for many weeks she gave 13 quarts at one meal, each quart producing 2 ozs. of butter; the quantity being so large, I had the milk kept by itself and at seven-days' end we churned twenty-six pounds of butter, and during this time the cow got nothing but grass from an ordinary pasture." The descendants of this cow were apparently well-distributed in the two counties. Another of these famous early dual-purpose cows was "Dairy," owned by Mr. Calvert, of Sandysike, nr. Brampton. "This cow gave, on a pasture of middling quality, 28 quarts of milk per day, from her calving time in spring till mid-summer." The effects of these performances led Dickinson to play the rôle of prophet, for he remarks, "there can be no doubt of raising a breed uniting these very desirable qualities, if due pains were taken in some large stock which could send out a number of young bulls annually; the elements of success are not scarce; they only want concentrating by some man

of resolution strong enough to reject a fine or favourite animal if defective in her milking qualities."

A new turn was given to Shorthorn breeding in the two counties between 1850 and 1870. This to some extent synchronised with the death of Thomas Bates, whose herd at Kirklevington had commanded considerable attention, as also with the claims made on behalf of the Booth strains of blood, which by this time had claimed some support among breeders both in Cumberland and Westmorland. What these two counties owe to their public-spirited landowners can never be measured, but they have been fortunate in having identified with them men of outstanding ability in matters pertaining to stock-breeding, and what is still more important their tenants were able to benefit by reason of the bulls distributed in the various localities. Westmorland at this period claimed its full share of notoriety. There was established at Storrs, on the banks of Windermere, about 1858, one of the best Booth herds, by the Rev. Thos. Staniforth. This breeder had first acquired his knowledge of the breed in the Craven district, and the Booth strains of Cressida, Bliss, Mantalini and Medora had due representation in his herd. The popular view that the Bates strains were best for the pail and Booth for the butcher does not find much support in the breeding records of these counties. Sinclair remarks in his *History of Shorthorn Cattle* that "the visitor to Warlaby in the days of Mr. Richard Booth's greatest success as an exhibitor must have noticed that great breeder's peculiar fondness for the old deep-milking dams of the herd, and his quiet smile at the people who stared with wonder at the fat daughters of those dams, and mistook the dams, with all their notable points of structure, for ordinary dairy cows." The breeding of both Booth and Bates cattle in Cumberland and Westmorland followed the strictly dual-purpose ideal, by reason of the fact that the district was essentially a breeding district where the market value of store and dairy stock depended upon the combination of milk and beef. It may be mentioned at this stage that the ordinary commercial farmers of these districts were in many cases more keenly alive to this ideal than some of those who later valued pedigrees more than the cattle themselves. The late Mr. John Thornton's preface to the dispersal sale catalogue of the Storrs herd in 1887 stated "for many years great attention was paid to the dairy properties, and the stock did enormous good in the counties of Westmorland and Cumberland; the best evidence of which is the great merit of high-class character of the cattle now found at the great fairs of Kendal and Penrith."

In the south of the county Lord Bective started the Bates herd at Underley in 1868, and here were concentrated some of

the most fashionable families in the days of the great Bates craze. A small fortune was spent in securing some of the most notable cattle of the day, culminating in the importation of the Tenth Duchess of Geneva from America at a figure of about 6,000 guineas. The principal families in the herd were the Duchess, Oxford, Gwynne and Darlington. The existence of such a highly-bred herd in South Westmorland had a considerable influence on the local cattle stocks. The tenants were encouraged to buy well-bred bulls and not a few of the present-day herds of short-pedigree cattle owe much of their present fame to bulls acquired at this period. The unfortunate part about much of the Shorthorn breeding at this time was that though many farmers used well-bred bulls in their herds, they took no trouble to record their pedigree and thus is explained the reason why many stocks carried all the attributes of pedigree cattle without any herd book confirmation. It is recorded by Garnett (*Westmorland Agriculture*) that when a sale was conducted at Burneside Hall in 1865 a visitor expressed the opinion to the owner that the prices were worthy of pedigree cattle, and in reply was told, "Pedigree, I kna nowt about pedigree; the'd o' ther pedigrees i' ther feaces, heddent tha? That's what I ga be."

Precisely the same trend in breeding was observable in Cumberland, indeed one is justified in assuming that the Cumberland breeders had already acquired at this period some of the best foundation stocks in the whole range of Shorthorn breeding. There was, for example, Mr. Ewan Troutbecks' herd of Gwynnes and Strawberrys at Blencow, which was dispersed in 1859; Sir Wilfred Lawson's Gwynnes and Waterloos at Brayton; Mr. Robert Jefferson's Cressidas at Preston Hows; and Mr. Foster's Oxfords, Winsomes and Gwynnes at Killhow. Perhaps the first considerable victory claimed by Cumberland cattle in the records of Shorthorn breeding was scored by Mr. Robert Thompson, of Inglewood, Penrith, who commenced breeding about 1870. He had a breadth of vision which at that time was unique, having regard to the cult of pure Booth and pure Bates breeding, which was then in vogue in other parts of the country. His herd was built up with families derived from five principal sources, viz. Mr. Fawkes' Millicent, which descended from the famous herd of Mr. Whitaker who was the friend of Coates and who had specialised on dairying; (2) the Pearls, a Cumberland family, which were favourites of Mr. Saunders at Nunwick; (3) the Killerby Madeline, which had an association with the Townley Butterfly blood; (4) the Inglewood Daisy, which claimed descent from Colling Old Daisy; and (5) several local tribes. The herd owed much to Booth strains, but Mr. Thompson's own preface to his catalogue for June, 1889, well describes

the system upon which he built his herd. "No prejudice has been indulged for any particular strain of blood, attention being fixed on the immediate wants and requirements of the herd, which has been bred with the object of obtaining animals of robust and healthy constitutions, combined with great dairy properties and symmetry of form." This breeder made it a rule to use only bulls out of good milking cows, which is of considerable interest in view of the part played by the herd in the show ring. The greatest success was achieved at the R.A.S.E. Show in 1888, when five animals from this herd were exhibited and all gained first prizes. The names of these were Molly Millicent, Inglewood Gem, Belle Madeline, Pearl Bangle and Master Shapely. Molly Millicent is believed by some of the older rank of breeders to be one of the best cows ever produced in this country and won four first prizes at successive Royal Shows. It was from this herd in 1889, that Royal Nottingham—"a very promising and beautiful roan bull calf"—by Beau Cumbrian 55,361 and out of Molly Millicent, went to Mr. Hobbs' herd at Maisey Hampton, in Gloucestershire. It was then reported that "the attractions of the well-known and beautiful cow Molly Millicent, combined with her splendid milking properties, and those of her dam, Fair Millicent 2nd with the near stamp of Beau Benedict 42,769 in the pedigree, induced Mr. Hobbs to give what he thought an extravagant price for this calf." Successes of this character were sufficient to give the herd a high local reputation, and tenant farmers in the two counties drew liberally upon the herd for their bulls. Thus in 1888 at an ordinary sale of the commercial dairy cattle of the district, held at Windermere, where an Inglewood bull had been in use, a dairy cow without any pedigree sold for 60 guineas, and the average throughout, including newly dropped calves, was upwards of £25. To return to the breeding performance of Royal Nottingham in the Maisey Hampton herd, it has been claimed that he "did more good in the herd than any other sire." There were other herds in the two counties which claimed much success in open competition, and mention might be made of Mr. J. H. Toppin's Booth herd at Musgrave Hall, Skelton, Penrith, represented by the Booth Bright, Medora, Madeline and Mistress Mary families; also the Greenhead herd belonging to Mr. W. Handley, and later his son Mr. John Handley.

The progress in breeding was of such an advanced character that in Thornton's Shorthorn Circular for 1890, it is related "that Cumberland and Westmorland, especially in the neighbourhood of Penrith, has become one of the best districts for good Shorthorns—in fact it is now as a breeding centre, what Darlington was in the early part of the century." The tribute was justly merited, and registered specimens of the breed at this

stage were being kept in still greater numbers. The contribution of the district apart from the strains favoured was a responsible factor in promoting the desirable type of cattle associated with the counties. A writer in the *Live Stock Journal* about 1890 puts this point very forcibly in reviewing Mr. Edward Ecroyd's Armathwaite herd of Bates and Booth strains. Says the writer, "the herd he has established shows that his taste is strong in the direction in which taste mostly runs in Cumberland—for Shorthorns of a robust, showy stamp, with plenty of substance, plenty of hair and constitution fit for the climate. Weaklings would soon drop off up there." It is worthy of mention, too, that these districts escaped the full force of the agricultural depression which elsewhere caused such upheavals in the agricultural life of the country during the latter part of the last century, and thus a degree of continuity of policy was ensured.

It may be remarked at this stage that a departure was observable in regard to the dual-purpose ideal, particularly among some of the Cumbrian breeders. There were those who were duly impressed with the purely beef type by reason of its commercial significance for the export trade, and to whom milk was of secondary importance. The small commercial breeders were not slow to recognise the evils of this tendency, and in the eyes of some "pedigree" was at a discount on these very grounds. Indeed some of the ordinary non-pedigree herds at this time had arrived at such a high state of excellence that it became necessary to exercise great care and judgment in the selection of sires and in some cases the preference was for the use of non-pedigree bulls, of proved dual-purpose ancestry. This feature led Mr. Wm. Thompson, of Moresdale Hall, Kendal, towards the end of 1892 to advocate the desirability of specially distinguishing milking Shorthorns in the Herd Book. This drew from Mr. G. J. Bell, of the Nook, Irthington, Carlisle, a tenant farmer, the rejoinder that during 29 years' breeding of Shorthorns he had studied milking capacities first and during most of that time had kept records of milking properties. It became obvious to many of the far-seeing breeders that even for their own local trade in the provision of bulls for ordinary commercial herds recorded performance was of more value than mere appearance. Yet, notwithstanding this, these north-western breeders have never neglected the appeal to the dam of their future stock bulls, and, records or no records, have placed great reliance on the good all-round individual merits of bull-breeding cows. The emphasis placed on the needs for accurate records, although no new feature, led to a rather more general adoption of the principle. Thus Mr. Wm. Graham, of Eden Grove, who had collected a herd of good cattle, principally

Laurestinas, was recording yields in 1893, while in Westmorland, the Underley herd which had by then passed into the hands of Lady Henry Bentinck, the daughter of the Earl of Bective, commenced the daily recording of yields in 1894. The Underley herd had departed somewhat from the pure Bates strains which were such a feature during the Earl of Bective's lifetime, and included some of the short-pedigree animals for which the two counties are famous. In reality their pedigrees are much longer than their present records show, but their early breeding has not been noted or entered in the Herd Book. At Underley the Heroine and Princess Procter families were principally developed under the new ownership. Both these distinguished themselves at the London Dairy Show in the milking trials and butter tests between 1896 and 1900. It was from this herd that Mr. R. W. Hobbs acquired two young bulls in the autumn of 1900 for his Kelmscott herd. These were Captain Moss and Underley Hero 2nd, and both sires made a considerable impression on the Gloucestershire herd before the Cranford influence was felt.

It was not until 1905 that the Dairy Shorthorn Association was founded to officially safeguard the dairying qualities of the Shorthorn breed. The subsequent development of the Cumberland and Westmorland Shorthorn has in no small measure been due to the steps taken by this association to stimulate a market for proved dual-purpose animals. This is supported by the fact that at the present time Cumberland and Westmorland individually easily outnumber any other county in the country in respect of herd membership figures in the Dairy Shorthorn Association. This position is somewhat explained by the fact that the two counties, as in Longhorn days, are definitely breeding counties. The policy of the majority of farmers in the past has been to maintain young herds of cattle, rearing all the heifer calves, which in the course of time enter the breeding herd. As the young heifers calve down room has to be made for them in the herd, and this necessitates disposing of animals on a regular age basis. Thus the Cumberland or Westmorland dairy cow is usually worth most money in the market after having produced three or four calves at the outside. Regular drafting is therefore the rule and it is this fact which has largely contributed to the reputation which these cattle have acquired in other parts of the country. The fact that they have been drafted from the herd for no fault, but are genuine and sound cows, goes a long way towards explaining their popularity. It must also be recognised that these cattle are reared under very hardy conditions in the majority of cases, and are not accustomed to a pampered existence. The districts are mainly pastoral. Winter food supplies are not over abundant, and by reason

of the climate not always of the best quality. In many cases the cattle are never bedded with straw in the cowsheds and byres, this being utilised for feeding purposes. It is therefore small wonder that when these animals are sent to other districts, particularly south of their breeding area, they invariably give an excellent account of themselves and respond quickly to the changes which they thereby experience.

In regard to the non-pedigree draft cows, these have for several decades past been largely absorbed by the town dairies in various parts of the country by reason of their dual capacities of yielding large quantities of milk and at the close of their milking career presenting reasonably good carcasses of flesh. This has not been a desirable feature from the national standpoint, for many of these beautiful dairy cows have been sacrificed in this way, and the breeding herds of the country are much poorer in consequence. Cows of this kind deserve perpetuation as long as they have breeding capacities and the grading-up schemes for herd-book registration are calculated to ensure the cessation of premature disposal of desirable cows. It is interesting to record here that in 1917 a Cumberland and Westmorland Dual-Purpose Shorthorn Association was formed with the express object of providing these unregistered cattle with the advantages of pedigree status by recording the breeding and milk yields of approved cattle. While the aims were undoubtedly sound and gained for it considerable support, the Association had to compete subsequently with the grading-up scheme of the Dairy Shorthorn Association. No advantage was to be gained therefore from duplicating schemes of this kind, and the Association ceased to function in 1924.

Penrith is now the recognised sale centre for the disposal of these high-class Shorthorns. An association of Shorthorn breeders controls the pedigree shows and sales which are held quarterly, while Mr. John Thornborrow, of Thornborrow & Co., as auctioneer is to this district what the late Mr. John Thornton was to the wider Shorthorn world fifty years ago. Classes for milk-recorded dairy cows were first instituted at Penrith in 1914. In 1919 classes for dairy bulls were added when an entry of 31 head was received. The rapid progress of this movement to encourage dairying properties is indicated by the fact that during the last five years approximately 400 dairy-bred bulls have been entered annually at these sales. A considerable number of these are purchased by live-stock officers under the Ministry of Agriculture's live-stock improvement schemes. The February sales usually attract the largest entry for bulls, and the demand for these is invariably keen. It may be remarked in relation to the milk-recording movement in the two counties that until quite recently no attempt had been made to force cows for high

yields of milk. The main essential was rapid breeding, but more recently, in view of the stress placed upon yields, cows are being managed more in accordance with the recent developments in feeding knowledge. It is nevertheless a fact that high-feeding is viewed with suspicion by some on the grounds of economy. The more general adoption of the practice of milk-recording has also done much to remove the suspicions carried by some of the commercial breeders in respect of the use of pedigree sires. Pedigree breeders too, having observed the gamble of using bulls purely by reason of their good looks, are more fully alive to the value of a milk-recorded ancestry. With this recent development there is no disposition to sacrifice the stamina which has always characterised these north-western cattle. There is indeed no market for animals of any other type. These cattle are now, as formerly, "big cattle in a little room," and carrying their "pedigrees on their backs." It is the possession of this stamina which is largely responsible for the annual exodus of bulls to all parts of the country with the object of improving the "shelly" and light-fleshed types, frequently found in other parts. These north-western cows in turn are characterised by being remarkably short on the leg and are usually very well-coloured animals.

The Cumberland and Westmorland Shorthorn has not been free from criticism. Assertions have sometimes been made that some of its most famous cows are "sports" in the breeding sense without the capacity for reproducing their own good properties in their progeny. Where experiences of this kind have occurred it is due largely to the failure to observe correct mating. The district has produced a great many families which can be relied upon to give absolute satisfaction as breeding cattle of dual-purpose types. The fact that some breeders have introduced dashes of Scotch "blood" into their herds does not necessarily mean that the milking properties of the strain have been impaired. It is worthy of mention that some of these so-called Scotch cattle were originally drawn from Cumberland, and that the perpetuation of milking qualities is largely dependent on selection of suitable animals. No breeder of dual-purpose Shorthorns is so blind as to introduce sires into his herd unless he has some satisfactory evidence of the milking capacities of the strains concerned. The surest evidence that these very desirable cows do reproduce their own good qualities in their progeny is forthcoming in the large number of local herds which continue to place on the market, as they have been doing for generations, cows which maintain the standard in the show and sale-rings of the country. A herd of good cattle like that collected from the best stocks in the two counties by Mr. Joe Moffat, of Kendal, for example, from which a considerable

number of prize-winning cows have been sold, is a further proof of the reproductive abilities of these animals.

No record of the Cumberland and Westmorland Shorthorn would be complete without some reference to the families which have been prominently before the public eye in recent years. Rightly or wrongly, the female line of the pedigree has still a peculiar charm of its own to Shorthorn breeders. A good family connection in the female line has a great deal to commend it from breeding records. This does not necessarily assume that the sire's side of the pedigree is of no value, but it tends to indicate that good females of necessity demand the services of good males for mating purposes, and therefore a good line of cows will usually be mated with a good line of bulls in any herd of repute. A perusal of many of the pedigrees of these north-western cattle at once reveals the influence of the sires used in various herds, and this is true both of the long and short pedigreed animals which have distinguished themselves. In the majority of cases, the sires used in the last fifty or more years have been mainly of local breeding. In relation to this one is perhaps justified in regarding the Furness district of North Lancashire as within the breeding area, and the great Bates herd of the late Duke of Devonshire at Holker, and those of the Ashburners helped greatly to mould the local types by the distribution of high-class bulls. Close adherence to any particular old line of breeding is very rarely followed in the two counties at the present time. There is, however, one outstanding Bates herd in existence, viz. that maintained by Mr. Joseph Harris on his Brackenburgh Estate, midway between Penrith and Carlisle, which was founded in 1881. Here the old-time families of Duchess, Oxford, Waterloo and Gwynne, are maintained intact, and it says something for the modern herd that the champion Dairy Shorthorn at the 1925 Royal Show was a Brackenburgh-bred Gwynne.

FAMILIES WHICH HAVE CONTRIBUTED TO THE REPUTATION OF
THE CUMBERLAND AND WESTMORLAND SHORTHORN.

Bridekirk.—An old Cumberland family, developed by Joseph Barnes, Barugh Syke, Wigton, which has produced many show females and several bulls of the dual-purpose Cumberland type. Baron Bridekirk 33rd sired the well-known prize-winning cow Bridekirk's May, which has also given rise to a good family.

Cressida.—An old Cumberland family, chiefly identified with the herd of late Archibald Ritson, Hawkrigg House, Wigton. For a great number of years this family has had a high local reputation. At the Hawkrigg dispersal sale in 1918, 19 females of this family averaged £201 8s.

Daisy Belle.—A short pedigree family, developed in the

herd of T. Bennett, Wallthwaite, Threlkeld, Penrith, who has also developed several other good short-pedigree families.

Greenleaf.—One of the most notable families at the present day. Associated with the herd of Joseph Hope, Ireby Hall. A famous prize-winning and milking ancestry on female side, including Greenleaf 78th, the champion cow at the Newport Royal and first in her class at the Nottingham Royal Show, 1928.

Grey.—An old family, much influenced in its early history by Bates blood, and recently associated with the herd of R. Douthwaite, Thornship, Shap. An excellent breeding, exhibition and milking type, including Betsy Grey, sold at S. R. Sherwood's sale for 710 guineas and afterwards winning 1st (inspection) and 1st (milking trials) at the 1919 London Dairy Show; also Rose Grey 3rd sold for 600 guineas; Betsy Grey 2nd, 1st R.A.S.E. Show, 1919, etc.

Gwynne.—An old family, associated with many Cumberland and Westmorland herds, and with a considerable local reputation, the bulls having been extensively used.

Heroine.—A short pedigree family, which was one of the principal families at Underley from 1896 to 1922. The bulls of the family—Underley Hero—have been extensively used, and the female line includes Dairy Show winners.

Isabella.—An old family, tracing back to Mr. Booth's Medora, and recently associated with the herd of J. Bell, Moor House, Orton. Some high prices have been realised for bulls and cows of the strain.

Johnby Rose.—Named after village of Johnby. The family was for long associated with the herd of the late Messrs. J. & T. H. Workman, and later with that of T. W. Workman, The Beeches, Carleton, Carlisle. A famous breeding, exhibition and milking family.

Lady Nottingham.—A short pedigree family, also associated with the herd of the late Archibald Ritson, of Hawkrigg. Produced the celebrated sire Lord Nottingham 116317, used so successfully by H. A. Brown, at Grendon. An excellent breeding and milking family.

Lady Windsor.—A long pedigree family, developed by the late J. & D. D. Lazonby and W. St. G. Lazonby, Calthwaite House, Calthwaite. This family has achieved great distinction in southern and midland herds, and includes Lady Winsonia 2nd, Champion at the R.A.S.E. Show, 1924.

Lorna Doone.—A short pedigree family, developed by T. Watson, Chapel House, Mungrisdale, Penrith. It combines milk yielding and prize-winning achievements.

Merry Maid.—A short pedigree, also developed in the herd of T. Watson, Mungrisdale, Penrith; more recently associated with the herd of J. Moffat, Kendal. It includes Merry Maid 5th,

a winner of inspection and milking trials at the London Dairy Show, 1921, 1922 and 1923.

Millicent.—An old family, made famous in the herd of R. Thompson, Inglewood, Penrith, through the celebrated Molly Millicent, and the modern representatives still display dual-purpose qualities.

Primrose.—This family was one of the most notable to advertise the merits of the Cumberland Shorthorn in recent years, especially through the famous Primrose Gift, bred by the late John Graves, Thornby Villa, Wigton. She was Champion Dairy Shorthorn cow at the R.A.S.E. Shows in 1914, 1915 and 1916. Her daughter, Primrose Dairymaid, was reserve champion to her in 1915 and 1916. Primrose Gift was sold at Lord Lucas' dispersal in 1917, when 11 years old, for 750 guineas; her daughter Primrose Dairymaid made 810 guineas, and her son Premier Gift 710 guineas.

Procter.—Various strains of the Procter family have distinguished themselves in recent years. They all claim descent from the herd of George Procter, Low Bleaze, Old Hutton, Kendal. Two in particular were associated with Lady Henry Bentinck's herd from 1894 to 1922, viz. the Red Procter and Princess Procter families. All are excellent dairy, breeding and exhibition families.

Rosette.—Associated with the herd of William Taylor, Syke Side, Soulby, Kirkby Stephen. An excellent dairy family, which includes a cow sold at Kingham for 1,050 guineas, and several winners at the leading shows.

Ruby.—A long pedigree milking family, associated with the herd of the late W. C. Hope, Ireby, and much influenced by Bates blood, especially in the days of G. Ashburner. Countess Ruby is of this family.

Telluria.—Principally developed by the late James Spencer, Murrah Hall, Greystoke, Penrith. The family has produced many noted show and heavy milking animals.

Walnut.—This family in the herd of Mrs. Dobson, Larkrigg, Helsington, Kendal, has achieved much distinction, and sires of the tribe have proved very prepotent.

The above list of families is not intended to be exhaustive, but includes the principal tribes which have contributed towards establishing the fame of the Cumberland and Westmorland Shorthorn within the last twenty years. There have been breeders whose names are not mentioned above, but whose contribution to the successful development of this type of animal is worthy of perpetuation. These include, the late John Nelson, Undercragg, Mungrisdale; late Robert Nicholson, Gilts; late John Strong, Deerudding; Thomas Richardson, The Wreay, Wigton; and Lord Brougham and Vaux. Of existing herds,

a comprehensive record is provided in the membership returns of the Dairy Shorthorn Association.

In conclusion, I should like to acknowledge my indebtedness to the various agricultural historians to whom I have referred; to the opportunities obtained at Underley, where I spent my early life, of making myself familiar with some of the best of these cattle; and to Mr. John Thornborrow, of Penrith, for material information.

HENRY G. ROBINSON.

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Sutton Ponington,
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REPORT OF THE RESEARCH COMMITTEE.

THE Research Committee presents below a summary of work conducted, under its direction, during the year 1928:—

I. WORK COMPLETED OR IN PROGRESS.

INOCULATION OF LUCERNE SEED.

In their last year's report, the Committee drew attention to the success of the results of experiments conducted under the grant to the Rothamsted Experimental Station at some of the forty-four centres where trials had been arranged. It has now been established that the idea, formerly held, that lucerne can only be grown in certain districts, such as the South-Eastern Counties, is entirely fallacious, and that good crops can be grown in the whole of the North, West and South of England if the precaution be observed of using inoculated seed.

Where the causes of failure of inoculated seed were analysed, the predominating cause was found to be weed infestation. All trials agreed in showing that spring-sown lucerne under a cover crop was stronger than July-sown, and better able to compete with the autumn weeds. Another important condition is soil acidity. The nodule organism cannot persist in acid soils, and in such it is necessary to lime the soil if the inoculation of the seed is to have a proper chance.

An experiment was conducted to establish the length of time for which the culture can be kept, and as a result it is now established that there is no loss of efficiency up to nine weeks. Moreover, inoculated seed may be kept for at least two weeks if anything should happen to interfere with sowing immediately after inoculation.

Work has also been done to ascertain how much seed can be inoculated by one culture. Hitherto, 7 lb. seed has been the

limit of quantity, but experiments have now shown that this amount may be doubled without loss of efficiency.

The Committee feel that in this branch of their work the point has already been reached at which an issue of practical value to the agriculturist has been achieved. The question of the preparation of the culture for inoculation of seed, and its distribution on a commercial scale is under further consideration.

GRASSLAND IMPROVEMENT.

Shoby, Leicestershire.

This experiment, begun in 1923, was continued during the year. Meteorological conditions made the year an exceptional one, and the grazing season was curtailed to seventeen weeks in the case of the cattle, and sixteen weeks in the case of the sheep—the shortest recorded since the experiment began—owing to the hot and dry weather which prevailed in July, which seriously retarded the growth of the pastures. Rainfall at Shoby during the months, April–September, amounted only to 10.69 in., being nearly 4 in., or 33 per cent. less than that of 1927. Moreover, the weather conditions in April were cold and wintry, and the pastures showed little evidence of growth until the last week of the month. After the hot, dry conditions of July, the grass made little progress, and growth up to the end of September was disappointing.

There were five plots laid out for the experiment, and the manurial treatment given to each was as follows:—

TABLE I.

Manurial Treatment.

Area of each plot—10.66 acres.

Plot I.—Received $6\frac{1}{2}$ cwt. Basic Slag per acre during the winter of 1923–24, supplying 100 lb. of Phosphoric Acid per acre, and a further dressing of $6\frac{1}{2}$ cwt. per acre of slag supplying 100 lb. of Phosphoric Acid per acre during the winter 1926–27. This plot has now received 200 lb. of Phosphoric Acid per acre, in order to compare with Plot IV, which received the same amount in one dressing during the winter of 1923–24.

Plot II.—Received $6\frac{1}{2}$ cwt. Basic Slag per acre, during winter 1923–24, supplying 100 lb. of Phosphoric Acid per acre. The cattle and sheep grazing this plot received an allowance of Undecorticated Bombay Cotton Cake daily during the grazing season. The allowance of cake was discontinued in 1928.

Plot III.—No manurial treatment.

Plot IV.—Received 13 cwt. Basic Slag per acre, supplying 200 lb. of Phosphoric Acid per acre, applied during the winter 1923–24.

Plot V.—Received $6\frac{3}{4}$ cwt. Mineral Phosphate per acre, supplying 200 lb. of Phosphoric Acid per acre, applied in winter 1923–24.

The slag contained 30 per cent. of Total Phosphates with the usual guarantee as to fineness of grinding, and cost 49s. 6d. per ton, delivered at Grimston, which is equal to 1s. 7½d. per unit of Phosphate.

The Mineral Phosphate was Ground North African Phosphate, containing about 60 per cent. of Total Phosphates, and cost £3 7s. 9d. per ton, delivered at Grimston, which is equal to 1s. 2d. per unit of Phosphate.

A further application of slag was made in the case of Plot I, and it should be noted that the use of cake was continued on Plot II and during the season of 1927 two tons of Bombay Cotton Cake were consumed on this plot.

It will be noted that Plot III is the control plot.

The grazing periods in each year were as follows:—

TABLE II.

Grazing Periods.

CATTLE;—

1924.	May 16–October 3	(20 weeks).
1925.	May 12–October 2	(20 weeks).
1926.	May 7–October 15	(23 weeks).
1927.	May 6–September 23	(20 weeks).
1928.	May 18–September 14	(17 weeks).

SHEEP;—

1924.	May 16–September 19	(18 weeks).
1925.	Part from April 7–September 24	(21 weeks) and
	part from April 7–October 2	(25 weeks).
1926.	Part from April 9–August 27	(20 weeks) and
	part from April 9–September 24	(24 weeks).
1927.	April 22–August 26	(18 weeks).
1928.	April 27–August 17	(16 weeks).

The reasons for the shortness of duration of the grazing period in 1928 have been stated already.

All the cattle and sheep used in the experiments were bought by competent buyers, and sold by public auction at the conclusion of each year's grazing. The summary of the live-weight increases on each plot over the whole five-year period is given below:—

TABLE III.
Summary of Live-weight Increases per Acre.

	Plot I		Plot II		Plot III		Plot IV		Plot V	
	Slag applied in two dressings		Slag and cake. Cake discontinued in 1928		No Manure		Slag—One large dressing		North African Phosphate	
	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1924	226	43½	236	42½	156	40	201	47	193	38
1925	199	71½	220	62	167	66	208	79	168	70½
1926	268	67	275	67	228	56	274	73	233	63
1927	262	59	255	60	183	46	257	55	204	54
1928	196	50	174	48	138	44	193	49	172	46
	1,151	291	1,160	279½	872	252	1,133	303	970	271½

To make a comparison between the manured plots and the unmanured plot, the following Table has been prepared:—

TABLE IV.
Summary of Live-weight Gains per Acre of Cattle and Sheep above those obtained upon the Unmanured Plot.

		Cattle	Sheep
Plot I	Two dressings of slag	lb. 279	lb. 39
Plot II	Slag and cake	288	27½
Plot IV	One large dressing slag	261	51
Plot V	North African Phosphate	98	19½

There is thus no question as to the advantage derived from the application to the grassland of the manures. In every case the live-weight increase, both in cattle and sheep, contrasted with the unmanured plot is material. As regards the variations between the manured plots, the results from North African Phosphates are definitely inferior to those from the use of basic slag, but it is not possible to draw very definite conclusions as to the relative advantages accruing from the application of slag under the different conditions laid down for the experiment. The addition of cake-feeding had little effect on the resultant live-weight increase, and attention must be directed to the rather remarkable fact, in connection with this plot, that the manurial residues from the cake fed seem to have been without any result on the value of the grazing in the subsequent year. With regard

to the unmanured plot, it should be recorded that there was a noticeable improvement in the live-weight increase as the experiment proceeded, which must be attributed to the effect of thorough tillage operations on the grass in the shape of heavy harrowing, and to systematic grazing, though it did not stand up to the drought in 1928 so well as the manured plots. The Committee hopes to bring this experiment to a conclusion during the coming year, and to present the financial results of each of the plots.

GRASS SEEDING EXPERIMENTS.

Compton Cassey, Gloucestershire.

These experiments were started in 1925 to test the value of different seed mixtures on a farm belonging to Sir William Somerville in the Cotswolds on the oolite formation. Subsequently the farm was sold, but arrangements were made with Professor J. A. S. Watson to visit the plots during 1928 and to report upon their condition. Visits were paid by him on May 27 and July 23.

The plots were heavily grazed with cattle in spring, were cleared of stock about the beginning of May, and the grass was cut for hay about July 10. Owing to the cold and backward spring and the drought during June and July the plots were not looking really well at the date of either visit, and the hay crop appeared to have been, on the whole, very light.

The following is a summary of the observations made upon the individual plots, the various seedings being given in each case:

Plot I. 24 lb. Cocksfoot. Cocksfoot was easily the predominant species. The amount of intrusive grasses varied considerably from place to place. In some places there was practically none, while in others there was a good deal of *Agrostis*, *Poa annua*, etc. Intrusive plants of Wild White Clover occurred here and there. There were also occasional plants of Red Clover, Alsike Clover and Perennial Ryegrass, probably derived from hay fed upon the land. In general the sward was thin and the Cocksfoot plants were poor and stemmy. Miscellaneous plants were few. Wild White Clover had spread from Plot II for a distance of one to two feet.

Plot II. 24 lb. Cocksfoot, 1 lb. Wild White Clover. Except for two small patches, one stony and the other wet, there was a close sward of Wild White Clover and a fair, but rather sparse, growth of Cocksfoot. The wet patch contained much Coltsfoot and there were a few thistles. Otherwise there was little intrusive grass or weeds.

Plot III. 24 lb. Cocksfoot, 1 lb. Wild White Clover, 4 lb. Birdsfoot Trefoil. Birdsfoot Trefoil is present in quan-

tity. At the May inspection it constituted about 15 per cent. of the herbage that could have been grazed by cattle. Otherwise this plot was similar to No. II.

Plot IV. 24 lb. *Cocksfoot*, 2 lb. *Wild White Clover*, 4 lb. *Wild Trefoil*. The Trefoil was very scanty indeed, and was making no appreciable contribution to the total keep.

Plot V. 24 lb. *Cocksfoot*, 2 lb. *Wild White Clover*. Careful comparison failed to show any appreciable difference between this plot and No. II.

Plot VI. 24 lb. *Cocksfoot*, 2 lb. *Wild White Clover*, 2 lb. *Wild Red Clover*. There were a fair number of scattered plants of Wild Red Clover. It could not be said, however, that the plot was definitely superior to Nos. II, IV and V.

Plot VII. 24 lb. *Perennial Ryegrass*. The ryegrass formed a very thin poor sward and was very stemmy. There were a good many more weeds than on Plot I, e.g. Dandelion, Daisy, Cranesbill, etc. *Poa annua* was rather abundant. There were occasional plants of *Cocksfoot*. Intrusive Wild White Clover was widely distributed, but was nowhere forming a close sward.

Plot VIII. 24 lb. *Perennial Ryegrass*, 1 lb. *Wild White Clover*. Except at the lower end, which is wet, there was a good close sward of Wild White Clover. The ryegrass was leafier, at the May inspection, than that on Plot VII. There were few weeds. The amount of keep that could have been grazed by cattle was, however, small.

Plot IX. 12 lb. *Cocksfoot*, 12 lb. *Perennial Ryegrass*. This had a moderate sward with a sprinkling of intrusive Wild White Clover. The plot had, in May, substantially more keep on it than either No. I or No. VII.

Plot X. 12 lb. *Cocksfoot*, 12 lb. *Perennial Ryegrass*, 1 lb. *Wild White Clover*. This was the first plot that could be called a satisfactory pasture. The sward was quite dense and fairly even, and there were very few weeds. The total amount of keep was notably greater than on any plot up to No. IX.

Plot XI. 8 lb. *Cocksfoot*, 8 lb. *Perennial Ryegrass*, 8 lb. *Tall Oat Grass*, 1 lb. *Wild White Clover*. The plants of Tall Oat Grass were rather few, and mostly single stemmed; this species was not contributing much to the total herbage. The sward was less dense than on Plot X.

Plot XII. 6 lb. *Perennial Ryegrass*, 6 lb. *Cocksfoot*, 6 lb. *Tall Oat Grass*, 2 lb. *Crested Dogtail*, 2 lb. *Hard Fescue*, 4 lb. *Burnet*, $\frac{1}{2}$ lb. *Yarrow*, 1 lb. *Wild White Clover*. The species sown were all present in considerable quantity.

However, the Tall Oat Grass plants were small and showed no signs of tillering out; the Burnet was very stemmy and obviously of little use. The Yarrow was helping to produce a close sward. Crested Dogtail was making an appreciable contribution—more so than Hard Fescue. On the whole, although the sward was denser than on Plot X, there was less available keep. One got the impression that doubling the Cocksfoot and cutting out the Burnet and Tall Oat Grass might have given very good results.

Professor Watson concludes his report by observing that the value of Wild White Clover was very strikingly demonstrated by the plots, but it was obvious that 1 lb. per acre had constituted an ample seeding. Wild Trefoil was the only plant sown which was not producing any keep worth mentioning, and Tall Oat Grass and Burnet did not appear to have been worth inclusion. Crested Dogtail showed up rather well.

SUGAR-BEET PULP AND BEEF PRODUCTION.

A series of experiments to test the value of sugar-beet pulp as a cattle food have been in progress for some time at the Norfolk Experimental Station, with results which are summarised as follows:—

1. Dried sugar-beet pulp has proved to be a cheap substitute for swedes or mangolds as part of the ration of fattening bullocks. The animals fed on it have fattened quite as fast as those on roots, and have yielded carcasses equally good in respect both of proportion to live weight and quality of meat.

2. When fed alone pulp is eaten with relish, but when fresh roots were given as well as pulp some difficulty was experienced in keeping up the consumption of the latter. The admixture of a little Maize Meal to the pulp was found to be a sufficient inducement, but as a result of the initial difficulty the eight animals on the mixed root and pulp ration registered an average live-weight increase of 28 lb. per head less than the other groups. At 60s. per live cwt. this represented a loss of 15s. per head. The importance of maintaining good growth throughout the feeding period is thus emphasised.

3. The use of pulp has the advantage of eliminating any risk of frozen roots, and avoids the slight check which is often encountered when changing from swedes to mangolds. Less labour is required to handle the pulp than the corresponding amount of roots, but, on the other hand, a supply of drinking-water, which must often be carted to the yards, is absolutely essential to the use of dried pulp; it is possible to fatten satisfactorily without drinking-water when large quantities of fresh roots are available.

4. Attention is drawn to the effect of a replacement of stock-feeding roots by sugar beet upon the stock-carrying capacity of the farm, and an estimate has been attempted of the total contribution of the sugar-beet crop to the supply of home-grown feeding-stuffs.

A full report of the experiment has already been circulated to members (*Occasional Notes*, June, 1928).

MAMMITIS, OR MASTITIS, IN COWS.

Good progress has been made, during the year, at the Veterinary Pathological Research Institute, at Camden Town, with the investigation of this disease. There was no previous information or data to work upon, and the work had to be organised from the beginning. About 150 samples of material were received at the Institute from veterinary surgeons all over the country, and it has been established that in about 75 per cent. of cases the responsible organism was a *streptococcus*. There is evidence to show that the organism is strictly parasitic, and maintains its existence by growing within the cow's udder. The suggestion is thus raised that by separating infected cows from the rest of the herd it should be possible to prevent the spread of the disease, infection being carried, probably, by the milkers' hands. Work to test this hypothesis is now being carried out in seven herds, comprising 300 cows, in the neighbourhood of London. Observations will have to be continued for a long time, but the Committee feel that a most promising start has been made, and they attach great importance to this investigation of what is a very insidious disease.

II. NEW WORK.

THE EFFECT OF BARLEY MANURING ON THE FOLLOWING HAY CROP.

Some investigations upon this subject have been carried out at the Norfolk Experimental Station, and the results will be found in the report on pp. 134-141.

THE VALUE OF SUGAR-BEET TOPS AS A FOOD FOR STOCK.

The Committee has voted the sum of £50 to the Norfolk Experimental Station towards the cost of experiments now in progress on the value of beet-tops as a live-stock food. A report thereon is expected during the coming year.

THE WOBURN EXPERIMENTAL FARM, 1877-1927.

The Woburn Experimental plots have now been carried on for fifty years, until 1921 under the Royal Agricultural Society and since then under the Lawes Experimental Trust. During the whole of the period records of yields and rainfall have been taken carefully and conscientiously; after the first few years

much fuller meteorological data were taken and, in addition, much analytical work has already been done, and more is in course of completion, both at Rothamsted and Woburn.

Inspection of the results shows that the experiments have always been thoroughly carried out and that the figures are trustworthy. The results, however, have never been adequately worked up, partly because of the manifold duties of the Director of the experiments, but mainly because proper methods had not at the time been devised. It was always recognised that the data deserved much greater study than they had received, and indeed in 1922 the Council discussed and apparently sanctioned a scheme for doing this (*Minutes*, May 3, 1922, and May 2, 1923). It seems certain that there must be in all these data material of considerable value, and it is highly desirable that complete examination should be made while there are still available the men who carried out much of the work.

To assist in this work the Committee has voted the sum of £250 to the Rothamsted Experimental Station.

III. MISCELLANEOUS MATTERS.

"AGRICULTURAL RESEARCH IN 1927."

The Committee reports the issue of the above in November, 1928. About 4,250 copies were distributed to members, or sold during the three months following publication, compared with a total of about 4,000 copies of the previous year's volume. The Committee has resolved to continue the publication of this annual summary of the research work in agricultural science, designed to keep the farmer informed of its practical results.

MEDAL FOR ESSAY ON AGRICULTURAL RESEARCH.

Four Essays were submitted in 1928, but not one of these was considered by the Referees to be worthy of the award of the Society's Medal for Research.

It has been decided again to offer the Medal under the same conditions as were in force in 1928.

SUMMARY.

The Committee is satisfied, both from the applications received from research institutions and from the results of work already done with grants-in-aid made by the Society under its auspices, that a valuable contribution to the advancement of agriculture is being made under its direction. In all cases assistance has been given only after careful consideration, and for the purpose of the investigation of practical farming problems. Close touch is maintained by the Committee, collectively, and, in certain cases, individually, with the progress of the various experiments.

THE EFFECT OF BARLEY MANURING UPON THE FOLLOWING HAY CROP.

THE credit for the introduction of red clover into English farming is generally ascribed to Sir Robert Weston, who, following a short stay in Flanders in 1644, grew it as a crop at Sutton, Surrey. Though it was destined with roots subsequently to revolutionise English farming, more than a century elapsed before these crops came into general use. Due largely to the efforts of "Turnip" Townshend, and, later, Coke of Holkham, the full use of both crops was first appreciated in the Eastern Counties. Ultimately, during the latter half of the eighteenth century, the cultivation of roots and red clover became part of the best agricultural practice. They were incorporated in the Norfolk four-course rotation—roots, barley, clover, wheat—which persists unchanged in many districts and is still the backbone of arable farming in the Eastern counties.

The particular value of clover in increasing the soil fertility for succeeding crops is now fully realised and need scarcely be stressed here. The ability of clover, in common with other leguminous crops, to secure nitrogen from the air through the medium of symbiotic bacteria enables it to enrich the soil directly by the store of this most important plant food left in its roots. Further, the increase in organic matter in the soil resulting from the ploughing-in of a good clover aftermath is of particular importance on the light Norfolk soils, so much so that a good "take" of clover has come to be regarded as indispensable to the arable farmer. The reason is clear when it is realised that the failure of the clover in the normal rotation leaves, for all practical purposes, a crop of ryegrass so that the following wheat crop is virtually the third white crop in succession—a modification of the rotation wholly to be deprecated.

That the yield of wheat is greater after a heavy crop of clover than after a light one is generally admitted, and was shown in a trial at Rothamsted on the 1918 wheat crop.¹ In this case an increase in yield of 20 per cent. was obtained. This result was corroborated by a trial of a similar nature at the Norfolk Agricultural Station on the 1927 Little Joss wheat crop, which followed the Red Clover variety trials. The yield of wheat following a heavy cropping clover exceeded that following an adjacent light cropping one by 37 per cent. in one case and 30 per cent. in another.

¹ *Journal of the Board of Agriculture*, Vol. XXVI, No. 2.

In view of the importance of the clover crop the following results of trials of the effects of the barley manuring on the succeeding hay are of interest.

These trials arose directly from a series of experiments concerning the manuring of malting barley carried out for five years by the Norfolk Agricultural Station. These were co-ordinated with others throughout the country by the Rothamsted Experimental Station and were conducted in conjunction with the Institute of Brewing. Financial assistance was provided by the Royal Agricultural Society of England and the trials are very fully reported in "Field Trials in the Manuring of Malting Barley" by F. Rayns, M.A., in the *Journal of the Royal Agricultural Society of England*, Volume 88, 1927.

The effects of the various manurial treatments of the barley upon the undersown hay mixture were so striking to the eye in 1924 and 1925 that it was decided to record in detail the differences during the three following years, the necessary financial assistance again being provided by the Royal Agricultural Society of England. On those plots following barley which had received a manurial mixture including Potash, the clover was outstanding by reason of its remarkably luxuriant, healthy growth and darker colour. Where no Potash had been applied to the barley, however, this robustness of the clover was entirely lacking.

In "Field Trials in the Manuring of Malting Barley," referred to previously, the author states: "Whether barley responds to Potash or not, it is almost certain that on medium and light soils the full value of it will be returned on the succeeding clover or ryegrass mixture." It may be stated that the soil of the Norfolk Agricultural Station farm at Sprowston is a light loam with brick-earth subsoil, hence though the results which follow have proved applicable to similar soils, they do not purport to be capable of universal adoption.

The manurial scheme for the barley, with the plot quantities, was :—

Plot 1. No Manure.

Plot 2.	1 cwt. Sulphate of Ammonia, i.e. N or Nitrogen only.	
" 3.	1½ cwt. Sulphate of Potash	} i.e. KP or No Nitrogen.
	3 " Superphosphate	
" 4.	1 cwt. Sulphate of Ammonia	} i.e. NK or No Phosphate.
	1½ " Sulphate of Potash	
" 5.	1 cwt. Sulphate of Ammonia	} i.e. NP or No Potash.
	3 " Superphosphate	
" 6.	1 cwt. Sulphate of Ammonia	} i.e. NPK or Complete Artificial.
	3 " Superphosphate	
	1½ " Sulphate of Potash	

136 *Effect of Barley Manuring upon the following Hay Crop.*

There was actually a No Manure, or Control plot, alternating with each manured plot, and the whole series was duplicated.

The yields of the following hay for the three years were:—

WEIGHT OF HAY (AIR-DRIED). Cwts. per acre.

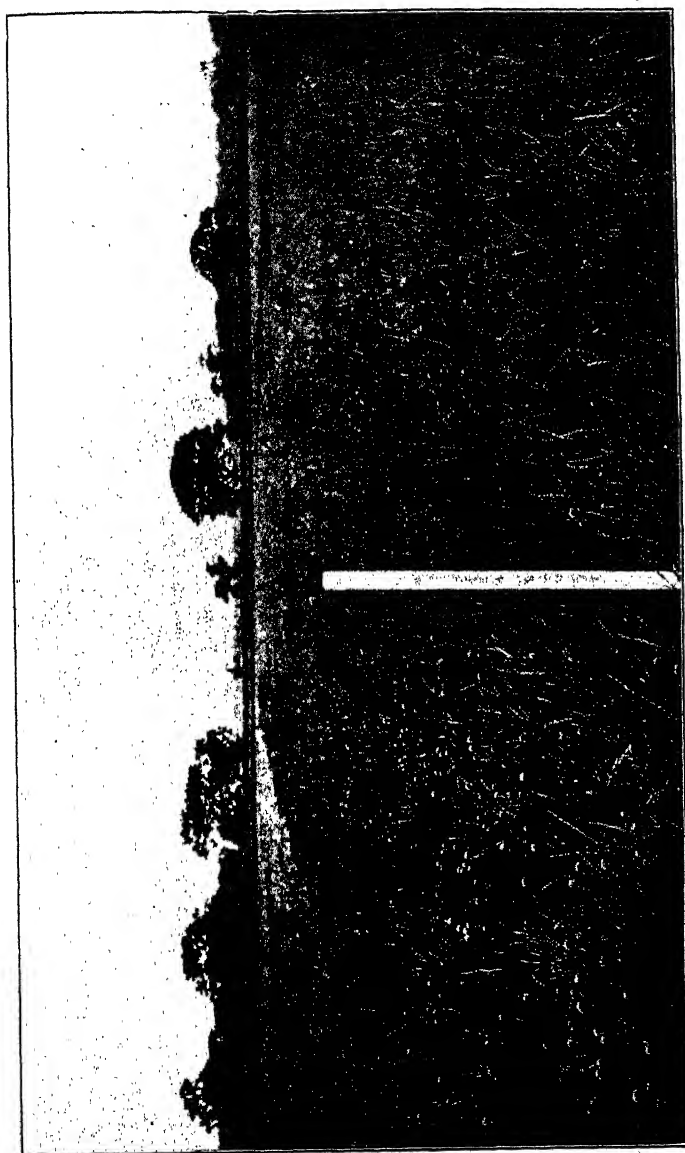
Manures applied to Barley	1926	1927	1928	Mean	As per cent. of Yield of No Manure
No Manure . . .	21	75	76	57.3	100.0
N	16	64	72	50.7	88.5
KP	31	93	93	72.3	126.2
NK	28	83	91	67.3	117.5
NP	20	78	74	57.3	100.0
NPK	37	90	91	72.7	126.9

1926.	1927.	1928.
12 lbs. Perennial Rye-grass.	10 lbs. Perennial Rye-grass.	12 lbs. Perennial Rye-grass.
10 „ Trefoil.	6 „ Montgomery	6 „ Norfolk Single
3 „ English Single	Late Flower-	Cut Cowgrass.
Cut Cowgrass.	ing Red	4 „ Alsike.
2 „ Alsike.	Clover.	
	4 „ Alsike.	

The beneficial residual effect of the Potash has been very marked in every year. The average yield of hay from the three Potash plots—KP, NK, NPK—for the three years has been 70.8 cwts. whereas the three “No Potash” plots—No Manure, N, NP—have given 55.1 cwts. per acre, an increase of 28.5 per cent. due to the potash residues.

Phosphates have produced a much smaller residual effect than potash upon the hay crop on the Sprowston type of light loam soil. The average yield of hay from the three “Phosphate” plots—KP, NP, NPK—has been 67.4 cwts. per acre, whereas the three “No Phosphate” plots—No Manure, N, NK—have given 58.4 cwts. per acre, an increase of 11.4 per cent. due to the Phosphate residues.

The application of the Nitrogenous manure alone to the barley crop, though substantially increasing the yield of barley, has consistently shown a depressing effect upon the following hay crop. The average yield of the Nitrogen-only plot for the three years is, in fact, 11.5 per cent. below that of the No Manure plot. This bears out the general impression that the increase obtained on the barley crop when Nitrogen is applied alone is effected by a “whipping” of the soil, with a resultant impoverishment for the following crops.



Right : Hay which received no manure.

Left : Strip-plot of hay after barley which received per acre :—
 1 cwt. Sulphate of Ammonia, 8 cwt. Superphosphate,
 1½ cwt. Sulphate of Potash.

Note stimulation of clover by Potash residues.

138 *Effect of Barley Manuring upon the following Hay Crop.*

Where, however, the Nitrogenous manure has been "balanced" by the addition of Phosphate and Potash, i.e. NPK, the "whipping" effect has been obviated. An economically high yield of barley was obtained, followed by the heaviest crop of hay.

It is possible to assess approximately the relative residual values of the Nitrogen, Phosphate and Potash in two ways. Firstly, a study may be made of the effect of omitting each manure in turn from the complete mixture. Secondly, the effect of adding each manure successively may be examined. The two results show very fair agreement, as will be seen in the table below.

	Effect		Effect
Omission of—		Addition of—	
K from Complete Artificial . .	-26.9%	K to N . .	+29.0%
P " " " . .	-9.4%	P to N . .	+11.5%
N " " " . .	-7%	N to No Manure	-11.5%

These figures, though not submitted as an exact enumeration of the values, do very clearly indicate the relative influences of the three manurial ingredients of the complete mixture upon the hay crop. It is evident that the Potash residues exert by far the greatest influence, that of Phosphate being much less. The fact that the addition of the Nitrogen alone to the barley has given a decrease of 11.5 per cent. stresses the point already raised, that on comparable soils it is highly advisable to add Potash and Phosphate, particularly the former, to the nitrogenous manure, otherwise the following hay crop will most certainly suffer.

YIELD OF CLOVER HAY, OWTS. PER ACRE.

Manure applied to Barley Crops.

No Manure.	Sulphate of Ammonia. (and Superphosphate).	Sulphate of Potash. (and Superphosphate).
31.0	23.7	35.3
(Reference. Rothamsted Report, 1923-4, p. 115.)		

THE QUALITY OF THE HAY.

In an inquiry into the effects of the manurial residues upon the hay crop, it is important to consider the influence upon quality as well as upon quantity. A study of the botanical analyses of the various plots shows that the increases or decreases in the yield of hay have been governed by the residual effects of the manures upon the clover portion of the mixture. The proportion of clover in the hay for the three years was:—

Manure applied to Barley	Percentage Clover in Hay, by weight			
	1926	1927	1928	Mean
No Manure	62.0	46.6	43.4	50.7
N	58.4	41.8	40.3	46.8
KP	76.9	68.8	65.5	70.4
NK	68.9	58.5	62.6	63.3
NP	73.7	48.1	44.1	55.3
NPK	64.0	68.3	61.4	64.6

It will be noted that the variations in the yields of hay from the different plots almost exactly coincide with the variations in the amounts of clover in the hay. It is therefore clear that the increased yields due to the Potash residues have been a result of the stimulating effect which these have had upon the clover. This was evident from a casual glance at the plots in the field in each of the three years.

Since the Potash plots—NPK, NK, KP—have given the highest yields of best quality hay, it follows as a natural corollary that they have given the greatest amount of food value per acre. It can be calculated that the NPK plot has, in the present instance, given annually 800 lbs. of Starch Equivalent per acre more than the N alone plot. In the form of the ordinary purchased foods, this amount of Starch Equivalent would cost about 50s.

SUBSIDIARY POINTS.

Weed. The proportion of weed in the hay from the various plots was negligible in 1926 and 1927. In 1928, however, weed was much more prevalent, cut-leaved Geranium (*G. dissectum*) predominating. The following table shows the actual amount of weed in the hay from the different plots:—

1928 HAY CROP.	
Percentage of Weed, by Weight	
Barley Manuring	Per cent. Weed
No Manure	6.8
N	7.2
KP	2.6
NK	4.6
NP	6.8
NPK	4.3

The effect of the increased growth of clover on the Potash plots has been distinctly to repress the weed. This is, of course, quite in accordance with general farming experience.

The Harvesting of the Barley.—One possible ill-effect which might follow the stimulation of the clover by the Potash was experienced during the harvesting of the barley crop in 1927. Exceptionally heavy rainfall occurred during the summer, with the result that the "seeds" under the barley were very forward, particularly on the Potash plots. This occasioned some slight delay before the barley could be carted, as the conditions did not favour the drying of the clover in the butts of the sheaves. In other seasons, however, more normal weather conditions prevailed so that no delay occurred.

SUMMARY.

Various combinations of the three classes of artificial manures, viz.: nitrogenous, phosphatic and potassic, were applied to the barley crop following swedes carted off the land. The actual manures used were Sulphate of Ammonia, Superphosphate, and Sulphate of Potash. The soil is a light loam overlying a brick-earth subsoil.

It was found that these manures not only exerted varying influences on the barley crop, but also had a striking effect upon the undersown one-year seeds mixture.

Of the three manures used, the Potash had by far the greatest residual effect upon the succeeding hay crop. The clover was visibly stimulated, with the result that not only was the yield of hay substantially increased, but there was a higher proportion of clover in the hay.

The effect of the Phosphate residue was not nearly so marked. The yield of hay was increased, but the clover was far from being as robust or luxuriant as on the Potash plots.

The Nitrogenous manure, when applied alone to the barley crop, has consistently shown an adverse effect upon the seeds hay. The yield of hay has been lower than where no manure whatever was applied to the barley, a result due to the poorer growth made by the clover, entailing a decrease of the proportion of it in the hay.

While increase in hay yield has been coincident with increase in the proportion of clover, the amount of weed has been decreased in inverse ratio.

Attention has been drawn to the possibility of excessive early growth of clover interfering with the harvesting of the barley crop. While this could be obviated in practice by withholding the potash portion of the mixture from the barley and

applying it to the seeds, the risk is too slight in the Eastern Counties to warrant the loss of the beneficial effect of the potash upon the barley.

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CONTEMPORARY AGRICULTURAL LAW.

I.—LEGISLATION.

THERE have been some important Acts of Parliament affecting Agriculture and agricultural interests passed in 1928.

The first Act to be mentioned is the National Health Insurance Act, 1928 (18 and 19 Geo. 5, c. 14), which amends the National Health Insurance Act, 1924, and other enactments relating to health insurance. The only provision in this Act which it is necessary to refer to here is contained in Section 20, which adds to the employments within the meaning of the Act: "Employment in the United Kingdom by way of manual labour under a contract for the performance of such labour for the purposes of any trade or business, except in so far as such employment is excluded by a special order. The person for the purposes of whose trade or business the labour is performed shall, in relation to the person performing the labour, be deemed to be the employer of that person for the purposes of this Act." This is a change of substantial importance for it would bring into compulsory insurance under the Act persons engaged by a farmer or other person to perform manual labour for the purpose of his business, *e.g.* a carpenter employed to repair gates or fences, a blacksmith called in to repair implements or shoe farm horses, a thatcher called in to thatch by the piece, although such persons may be engaged as independent contractors and not under a contract of service.

The only part of the Finance Act, 1928 (18 and 19 Geo. 5, c. 17), which need be noted here is the Third Schedule to the Act which substitutes for paragraph 5 of the Second Schedule to the Finance Act, 1920, stating the duties to be charged on mechanically propelled vehicles weighing more than 8 cwt. unladen constructed or adapted for use and used solely for the conveyance of goods in the course of trade, a new scale of duties with a special scale (c) for vehicles registered under the Roads Act, 1920, in the name of a person engaged in agriculture and used solely by that person for the purpose of the conveyance of the produce of, or articles required for the purposes of, the agricultural land which he occupies and for no other purpose. It is, however, provided that for the purpose of paragraph (c)

a vehicle registered under the Roads Act, 1920, in the name of a person engaged in agriculture shall not be deemed to be used otherwise than solely by that person for the purpose of the conveyance of the produce of, or of articles required for, the purposes of the agricultural land which he occupies, by reason only that on an occasion when the vehicle is being used for that purpose it is also used for the conveyance for some other person engaged in agriculture of the produce of, or articles required for the purpose of, agricultural land occupied by that other person if it is shown (a) that the vehicle is so used only occasionally; (b) that the goods conveyed for that other person represent only a small proportion of the total amount of goods which the vehicle is conveying on that occasion; (c) that no payment or reward of any kind is, or is agreed to be, made or given for the conveyance of the goods of that other person.

The Agricultural Produce (Grading and Marking) Act, 1928 (18 and 19 Geo. 5, c. 19), was passed to provide for the grading and marking of agricultural produce. It provides by Section 1 that the Minister of Agriculture and Fisheries may by regulations prescribe the use of "grade designations" such as he may consider appropriate to indicate the quality of any articles of agricultural produce, and by Section 2 that he may prescribe "grade designation marks" such as he may consider appropriate to represent any grade designation. Section 3 contains special provisions as to the marking of preserved eggs and makes it unlawful after February 28, 1929, to sell or expose for sale any egg which has been subjected to any process of preservation unless the egg is marked in the prescribed manner. Under Section 4 any premises used or intended to be used by way of trade or for purposes of gain for the cold storage of eggs may be registered in the prescribed manner in a register kept by the Council of the County or County Borough in which they are situate and, so long as any Order in Council under Section 2 of the Merchandise Marks Act, 1926, is in force prohibiting the sale in the United Kingdom of imported eggs unless they bear an indication of origin, no premises may be used by way of trade or for purposes of gain for the cold storage or chemical storage of eggs unless the premises are registered, and it may be noted here that an Order in Council has recently been made requiring the marking of imported eggs which becomes operative so far as it affects eggs in shell on April 21, 1929. It will not be lawful to cause British eggs which have been kept in cold storage or chemical storage in any premises used for such storage of eggs by way of trade or purposes of gain to be removed from such premises unless they have been marked in the prescribed manner. Section 5 provides that it will be the duty of the Council of every County or County Borough to carry

out the provisions of the Act. Penalties are imposed for breaches of the Act and the regulations made thereunder. Regulations have recently been made under this Act by the Minister as to grade designations and grade designation marks and as to the marking of eggs which have been subjected to any process of preservation (S.R. & O. 1928, No. 984).

The Dogs (Amendment) Act, 1928 (18 and 19 Geo. 5, c. 21), amends the Dogs Act, 1906, which by Section 1 provided that the owner of a dog is to be liable in damages for injury done to any cattle by that dog without the necessity of proving the previous mischievous propensity of the dog or the owner's knowledge of such propensity, by enacting that that act shall have effect as if that Section applied to injuries done to poultry as it applies to injuries done to cattle. The Act of 1928 also provides that Section 6 of the Act of 1906 (which provides that an owner of cattle shall not leave their carcasses unburied in a place to which dogs can gain access) shall apply to a person having the control of cattle as it applies to an owner of cattle. "Cattle" by this definition in the Act of 1906 includes horses, sheep and other animals.

The Food and Drugs (Adulteration) Act, 1928 (18 and 19 Geo. 5, c. 31), consolidates the previous Sale of Food and Drugs Acts. The most important sections of this Act from the agricultural point of view are Section 2, which prohibits the sale of articles of food not of the nature, substance or quality demanded; Section 6, which deals with the conditions to be observed in dealings in margarine, margarine cheese, and milk-blended butter; Section 7, which empowers the Minister of Agriculture and Fisheries to make regulations as to the constituents of milk, butter, cheese, &c., and for determining what deficiency in any of the several constituents of milk, cream, butter or cheese or what additions of extraneous matter or proportion of water in any sample of milk (including condensed milk), cream, butter or cheese shall raise a presumption, until the contrary is proved, that the milk, cream, butter or cheese is not genuine or is injurious to health and for prohibiting the use as a preservative of any substance specified in such regulations in the manufacture or preparation periods of butter, margarine, or milk-blended butter; Section 10, which prohibits the use of adulterants in butter factories; and Section 12, which contains restrictions (amongst other things) on the importation into the United Kingdom of margarine or margarine cheese except in packages conspicuously marked as containing such, of adulterated or impoverished milk or cream, except in packages or cans marked so as to indicate that the milk or cream has been so treated, of condensed, separated or skimmed milk except in tins or other receptacle which bear a label whereon the words

"Machine-skimmed Milk" or "Skimmed Milk," as the case may require, are printed in large and legible type, and of butter containing more than 16 per cent. of water and of milk-blended butter containing more than 24 per cent. of water. Part III of the Act is concerned with Administration and the duties of Authorities to enforce the Act. It is their duty to appoint analysts who are given powers of sampling. Part IV deals with prosecutions and penalties for breaches of the Act, and Section 29 lays down the conditions under which a defendant who is charged with an offence under the Act may be discharged from the prosecution on proving that he purchased the article with a written warranty that the article in question was the same in nature, substance and quality as that demanded of him by the person to whom he sold and that he had no reason to believe at the time he sold it that it was otherwise and that he sold the article in the same state as he purchased it.

Perhaps the most important from the point of view of the agriculturist of the Acts of Parliament passed in 1928 is the Agricultural Credits Act, 1928 (18 and 19 Geo. 5, c. 43), passed to secure, by means of the formation of a company and the assistance thereof out of public funds, the making of loans for agricultural purposes on favourable terms, and to facilitate the borrowing of money on the security of farming stock and other agricultural assets.

Part I of the Act deals with Long Term Credits and by Section 1 empowers the Minister of Agriculture and Fisheries with the approval of the Treasury with the view to the incorporation of a company having for its principal objects (a) the making of loans on mortgages of agricultural land, and (b) the making of loans under the Improvement of Land Acts, 1864 and 1899, for agricultural purposes to owners of agricultural land and with a view to securing that loans by such a company should be made in terms most favourable to the borrowers, to make advances to the company (for the purpose of establishing a guarantee fund) not exceeding £750,000, and by the same section the Treasury are empowered to subscribe to debentures to be issued by the company. Section 2 contains provisions with regard to the Memorandum and Articles of the company which are (amongst other things) to restrict the dividends on the share capital of the company to 5 per cent. per annum and to regulate the loans to be made by the company so that a loan shall in no case exceed two-thirds of the estimated value of the mortgaged property at the time of the loan and that the loans shall be repayable by equal yearly or half-yearly instalments of capital and interest spread over a period not exceeding 60 years or repayable on such other terms as may be authorised by the Memorandum or Articles.

Part II of the Act deals with Short Term Credits and is intended to facilitate the raising of short loans from ordinary banks by farmers on the security of their farming stock and assets. "Farmer" is defined to mean any person (not being an incorporated company or society) who as tenant or owner of an agricultural holding cultivates the holding for profit, and "agriculture" and "cultivation" are to include horticulture and the use of land for any purpose of husbandry, inclusive of the keeping or breeding of live stock, poultry, or bees, and the growth of fruit, vegetables and the like. "Farming stock" has a wide definition to include crops or horticultural produce growing or severed, live stock including poultry and bees, seeds and manures, agricultural vehicles, machinery and other plant, and agricultural tenants' fixtures. "Agricultural assets" means a tenant's right to compensation under the Agricultural Holdings Act, 1923, for improvements, damage by game, disturbance or otherwise and any other tenant right. By Section 5 a farmer is empowered by an instrument in writing to create in favour of a bank an "agricultural charge" on all or any of the farming stock and other agricultural assets belonging to him as security for sums advanced or to be advanced to him or paid or to be paid on his behalf under any guarantee by the bank and interest, commission and charges thereon. An agricultural charge may be either a "fixed charge" or a "floating charge" or both a "fixed charge" and a "floating charge." Property affected by a fixed charge will be such of the farming stock and other agricultural assets belonging to the farmer as may be specified in the charge and may also include in the case of live stock progeny born after the date of the charge, and in the case of agricultural plant any plant which, whilst the charge is in force, may be substituted for the plant specified in the charge. Property affected by a floating charge will be the farming stock and other agricultural assets from time to time belonging to the farmer or such part thereof as is mentioned in the charge. The principal sum secured by an agricultural charge may be either a specified amount or a fluctuating amount advanced on current account not exceeding at any one time such amount (if any) as may be specified in the charge. The effect of a fixed charge is set out in Section 6 and stated shortly confers upon the bank on the happening of any event specified in the charge as being an event authorising the seizing of property subject to the charge (e.g. default in payment of interest or principal after demand or a receiving order in bankruptcy) the right to seize and sell the property, but with an obligation to apply the proceeds of sale in or towards the discharge of the moneys and liabilities secured by the charge and the cost of seizure and sale and to pay any surplus to the farmer. The farmer, so long as

the charge continues in force, will be under an obligation whenever he sells any of the property or receives any money in respect of other agricultural assets comprised in the charge forthwith to pay to the bank the amount of the proceeds of sale or money so received except so far as the charge otherwise provides or the bank allows. Subject to compliance with the obligations so imposed a fixed charge will not prevent the farmer from selling any of the property subject to the charge and neither the purchaser nor in the case of a sale by auction, the auctioneer will be concerned to see that the obligations are complied with, notwithstanding knowledge of the existence of the charge. Under Section 7 a floating charge is to have the like effect as if it had been created by a duly registered debenture issued by a company to which it is obviously intended to be assimilated. It will become a fixed charge upon the property comprised in the charge at the date of its becoming a fixed charge (i) upon a receiving order in bankruptcy against the farmer, (ii) upon the death of the farmer, (iii) upon the dissolution of partnership where the property charged is partnership property, and (iv) upon notice in writing to that effect given by the bank on the happening of any event which by virtue of the charge confers on the bank the right to give such notice. While the charge remains a floating charge, the farmer will be subject to the like obligation as in the case of a fixed charge to pay over to the bank the amount received by him by way of proceeds of sale, in respect of other agricultural assets, under policies of insurance, or by way of compensation, but it will not be necessary for him to comply with such obligation if and so far as the amount so received is expended by him in the purchase of farming stock which on purchase becomes subject to the charge. An agricultural charge is not to be deemed a bill of sale within the meaning of the Bills of Sale Acts, 1878 and 1882, and such charges will have priority in relation to one another in accordance with the times of registration. Moreover farming stock subject to an agricultural charge will not, for the purposes of Section 35 of the Bankruptcy Act, 1914, be deemed to be in the reputed ownership of the farmer. Where the farmer has mortgaged his interest in the land comprised in the holding, then if growing crops are included in an agricultural charge the right of the bank under the charge in respect of the crops will have priority to those of the mortgagee, but an agricultural charge will be no protection in respect of property included in the charge which but for the charge would have been liable to distress for rent, taxes or rates. There will be no stamp duty payable on an instrument creating an agricultural charge. By Section 9 every agricultural charge must be registered within seven days after its execution at the Land Registry. The regis-

tration may be effected by sending by post to the Land Registrar a memorandum of the instrument creating the charge and such particulars of the charge as may be prescribed and the prescribed fee. It will be deemed to constitute actual notice of the charge to all persons and for all purposes. Under Section 10 it is unlawful to print for publication or publish any list of agricultural charges. Under Section 11 a farmer who has created an agricultural charge and with intent to defraud fails to comply with the obligations imposed by the Act to the payment over to the bank of any sums received by him by way of proceeds of sale or removes any property subject to the charge will be guilty of misdemeanour and liable on conviction to penal servitude for a term not exceeding three years. Under Section 13 a farmer tenant of an agricultural holding will have the right to create an agricultural charge notwithstanding any provision to the contrary in his contract of tenancy. The Act came into operation on October 1, 1928.

Under Part I of the Act a company called the Agricultural Mortgage Corporation has now been formed with the assistance of the Government for the purpose of granting long-term loans and such loans may be obtained from the Corporation for a period of 60 years and repayable by half-yearly instalments of £2 15s. per cent. on the sum advanced to cover principal and interest and for a period of 40 years by half-yearly instalments of £3 per cent. The fees for valuation and stamp duty may be included in the advance.

The Rating and Valuation (Apportionment) Act, 1928 (18 and 19 Geo. 5, c. 44), was passed to make provision with a view to the grant of relief from rates promised in respect of certain classes of hereditaments (including the total relief from rates of agricultural lands and buildings) for the necessary distinction in valuation lists of the classes of hereditaments to be affected, and the apportionment in valuation lists of the net annual values of such hereditaments according to the extent of the user thereof for various purposes. It provides that in every valuation list the following classes of hereditaments shall be distinguished from each other and from all other hereditaments, viz., (a) agricultural hereditaments, (b) industrial hereditaments, (c) freight-transport hereditaments. By Section 2 "agricultural hereditament" means any hereditament being agricultural land or agricultural buildings. "Agricultural land" means "any land used as arable meadow or pasture ground only, land used for a plantation or a wood or for the growth of saleable underwood, land exceeding one-quarter of an acre used for the purpose of poultry farming, cottage gardens exceeding one-quarter of an acre, market gardens, nursery grounds, orchards or allotments, including allotment gardens within the meaning of the

Allotments Act, 1922, but does not include land occupied together with a house as a park, gardens (other than as aforesaid), pleasure grounds, or land kept or preserved mainly or exclusively for purposes of sport or recreation, or land used as a race-course." "Agricultural buildings" means buildings (other than dwelling-houses) occupied together with agricultural land or being or forming part of a market garden, and in either case used solely in connection with agricultural operations thereon. It will thus be seen that a decidedly wide meaning is given to these terms which define the property that will enjoy the benefit of the derating scheme under the Local Government Bill now before Parliament.

II.—DECISIONS OF THE COURTS.

1. *Labour*.—Two cases under the Agricultural Wages (Regulation) Act, 1924, requisit notice. In *Hayes v. Curtis* (139 L.T. 312), by an order of the Agricultural Wages Board minimum rates of wages were fixed for workmen in agriculture in Dorsetshire and by an order of the Dorset Agricultural Wages Committee it was provided that no benefit or advantage except a cottage or board and lodging should be reckoned as payment of wages in lieu of payment in cash. The farmer employed a cowman under a contract in pursuance of which the employer was to supply one pint of new milk daily to be purchased by the cowman. The purchase price amounting to 1s. 5½d. per week was deducted from the cowman's wages. The justices found that the arrangement was "in the nature of a sale" and that the cowman in effect paid the price by the deduction, but as there was apart from this allowance a deficiency in the wages paid by the farmer they convicted him for non-payment of wages at the full rate. On a case stated as to the deduction of the price of milk the Divisional Court held that the farmer had done the very thing which the statute and orders forbade, i.e. paid wages at less than the minimum rate fixed by the Order. The set-off of the purchase price was simply reckoning the milk as payment in lieu of cash. The conviction was therefore upheld.

Seabrook & Sons, Ltd. v. Jones ([1928] W.N., 298; 66 L.J.N.C., 446) was a case where an information was preferred against Seabrook & Sons, Ltd., employers in agriculture for unlawfully failing to pay an agricultural worker at not less than the minimum rate fixed by the Essex Agricultural Committee. The minimum rate for such workers over 21 years of age fixed by the Order of the Essex Agricultural Wages Committee, which had been confirmed by the Agricultural Wages Board, was 30s. per week of 50 hours in summer and 48 hours in winter. By Clause 2 of the Order "Where a whole-time male worker is

employed by the week or any longer period and the hours of work agreed between the worker and the employer in any week (excluding hours of overtime employment) are less than 50 in summer or 48 in winter, the rate of wages applicable to that worker shall be such as to secure to the worker the wages which would have been payable if the agreed hours had been 50 in summer and 48 in winter as the case may be." The Order fixed different rates for overtime employment. By Clause 7 of the same Order "For the purposes of the application of the above differential rates of wages for overtime employment the Essex Agricultural Wages Committee have by Order dated October 15, 1927, defined the following employment as the employment which is to be treated as overtime employment. . . . (b) All employment on a Sunday, Good Friday, Easter Monday, Whit-Monday, Christmas Day and Boxing Day." The employers in the week in April, 1928, in which Good Friday fell, intimated that in accordance with the custom of their business they would not require the worker in question and other employees engaged in similar work to work on Good Friday and they accordingly did not work on that day. In accordance with their custom the appellants gave their workers a bonus of half a day's pay in respect of Good Friday and the total payment made to the worker for that week in which he in fact worked 41 hours was £1 6s. 8d. The employers contended that assuming no bonus was paid for Good Friday they were justified in paying only 41-50ths of the usual weekly wage and that they were not compelled by the Act to pay an employee for time not worked. The justices convicted the employers of failing to pay wages at not less than the minimum rate, and on a case stated the Divisional Court affirmed the conviction holding that the Order provided that though the worker was employed nominally for a week if he was required to work less than 50 hours he should still have the full wages of 30s. as if he had worked 50 hours. It would appear to follow from this case that if a worker were required to work on Good Friday or one of the other days to which overtime rates applied he would in addition to the payment of overtime rate on that day, be entitled to receive the full wages for the rest of the week although he might have worked considerably less than 48 or 50 hours on the other days. He might, however, it would seem, be required to work out the 48 or 50 hours on the other days of the week.

In the Scottish case of *Stephen v. Cooper* (1928, S.C. 337; 1928 Sc.L.T., 322), the driver of a reaping machine on which a harness hook had got out of place went along the top of the machine to replace it instead of stopping and dismounting to do so. In doing this he fell and was seriously and permanently

injured by the cutting-blade. It was held that the accident arose from a peril added by the workman's own act and did arise out of and in the course of his employment and that the employer was therefore not liable to compensate him for the accident under the provision of the Workmen's Compensation Act, 1925.

2. *Landlord and Tenant*.—There have been a number of important cases reported under this head during 1928 which affect agricultural tenancies.

Tredegar v. Harwood ([1929] A.C. 72; 97 L.J.K.B., 392), was a much litigated case with reference to the rights of a landlord where the tenant has covenanted to insure the property let in a named Fire Insurance Office "or in some other responsible insurance office to be approved by the lessor." It was held by the Court of Appeal that this conferred upon the lessee an alternative to be exercised at his volition to insure in some other office and that the lessor could not refuse his approval except upon reasonable grounds from the point of view whether the proposed office is suitable for meeting loss by fire and he must not be influenced by external and extraneous considerations such as convenience of estate management. This decision was, however, reversed in the House of Lords who held that the lessor had the right to refuse his approval of any other insurance office than the one named as his consent was a condition precedent to the acceptance of an alternative office.

In *Cannon Brewery Co. v. Signal Press, Ltd.* (139 L.T., 384), the question arose as to whether a notice of breach of covenant to repair had been properly served on a tenant with a view to re-entry for breach of the covenant, and it was decided that such a notice is properly served if it is left with some person on the premises and if there are reasonable grounds for supposing that that person will, if possible, pass it on to the tenant.

Mansfield v. Robinson ([1928] 2 K.B. 353; 97 L.J.K.B. 466), was a case in which Section 16 of the Agricultural Holdings Act, 1923, which refers questions in dispute between landlord and tenant on the termination of a tenancy to the arbitration of a single arbitrator, and Schedule II, paragraph 15, of the Act, which gives the arbitrator power of dealing with the costs of arbitration, were held not to invalidate an agreement made between the parties prior to an arbitration in regard to the costs of the arbitration. Although the fact of such agreement was not mentioned to the arbitrator at the hearing and although his award provided for a different liability for costs the agreement was held to prevail and be enforceable.

In *Horrell v. Bletso* ([1928] 2 K.B., 616; 97 L.J.K.B., 655), it was held that the right given to a party by Section 19 of the same Act to recover in a county court a sum agreed between

landlord and tenant or awarded as compensation under the Act does not exclude the right of either party to bring an action in the High Court for the recovery of such sum, as the language of the section is permissive and not imperative, and the section contains no express words such as would be necessary to take away the *prima facie* right of a litigant to sue in the High Court.

In *Flather v. Hood* (44 Times L.R., 698), it was held that Section 25 sub-s. 1, of the Agricultural Holdings Act, 1923, which makes a twelve months' notice to quit necessary for the termination of a tenancy, applies to a notice to quit given by a tenant equally to a notice to quit from a landlord.

The Scottish case of *Gibson v. Sherret* ([1928] S.C., 493), dealt with a curious point under Section 1 of the Agricultural Holdings (Scotland) Act, 1923, which is for this purpose in the same terms as the English Act and provides that where a tenant of a holding has made thereon any improvement comprised in the First Schedule to the Act, he shall, subject as in the Act mentioned (and in a case when the lease was entered into on or after January 1, 1921, then whether the improvement was or was not an improvement which he was required to make by the terms of his tenancy), be entitled to obtain compensation from his landlord. A lease entered into before January 1, 1921, bound the tenant to adopt one of two rotations of cropping and the tenant adopted one of those rotations and thereby made an improvement upon his holding within the meaning of the First Schedule to the Act for which he claimed compensation on quitting the holding. It was held that he was entitled to compensation as for a voluntary improvement since he was not required by the lease to execute that particular improvement but was merely bound to adopt one or other of two alternative methods of cultivation.

Howson v. Buxton (97 L.J.K.B., 749) is an important case dealing with the not unusual circumstance of a tenancy of a farm granted to two persons as joint tenants, one being the actual farmer and supplying the capital and management, and the other added as affording additional security to the landlord for payment of the rent and performance of the other obligations of the tenant. In the case in question W. had been sole tenant of the farm and his tenancy having terminated a joint tenancy was granted to W. and his nephew B. Upon entering upon the joint tenancy B. not only paid W. for the tenant right but also provided the whole of the finance necessary for carrying on the farm. B. also owned all the household goods and implements of husbandry on the farm. The landlord subsequently gave notice to the tenants to terminate the tenancy, whereupon B. alone gave notice of his intention to claim compensation for disturbance as required by Section 12, Sub-sec. 7 (b) of the

Agricultural Holdings Act, 1923, which makes it necessary that "the tenant" not less than one month before the termination of the tenancy should give notice in writing to the landlord of his intention to claim compensation for disturbance. The landlord contended that the notice to claim should have been given by the joint tenants and was bad, having been given by B alone, and that he was therefore not entitled to the compensation claimed. It was held that the notice given by B, who was the owner of the household goods, implements of husbandry &c., on the farm and who alone had suffered loss by their removal or sale on the expiration of the tenancy, was sufficient to give the arbitrator jurisdiction to award compensation. It was said that great injustice would be inflicted on a tenant who had a proper and valid claim for compensation for disturbance if that claim were to be defeated by the fact that his joint tenant, who had no claim, did not join in the notice.

The Act, however, inasmuch as it is to be treated as a penal statute which derogates from the ordinary rights created by contract and inflicts upon the landlord something in the nature of a penalty when it gives compensation for disturbance, has in another recent case been very strictly construed. In *Selleck v. Hellens* ([1929] W.N., 4; 67 L.J.N.C., 52) the tenants who thought their rent too high gave notice to the landlord under Section 12, Sub-section 3, of the Agricultural Holdings Act, 1923, for arbitration as to the rent to be paid for the holding. The landlord did not refuse the demand for arbitration but within a reasonable time failed to agree to it. The tenants gave notice to quit and stated that the notice was given by reason of "your refusal to agree to the demand made for arbitration as to the rent." The section where there is a refusal or failure to agree to arbitration entitles a tenant to compensation for disturbance if he in consequence gives a notice to quit stating that it is given for that reason. On the termination of the tenancy the landlord disputed the tenants' right to compensation on the ground that the reason had not been rightly stated as required by the Act for he did not "refuse," but "failed to agree" to the demand for arbitration. This contention was upheld by the County Court Judge and by the Court of Appeal on the ground that the Act must be strictly construed and the tenants had stated the wrong reason. If they had said that it had been given because the landlord had failed to agree to the demand for arbitration the tenants would clearly have been entitled to what they claimed. This is a hard case, as it would seem that the landlord was not prejudiced in any way by the wrong alternative reason being given for the notice to quit.

3. *Stock and Crops*.—In *English Hop Growers, Ltd. v. Dering*

([1928] 2 K.B., 174; 97 L.J.K.B., 569), the plaintiff company, which was formed as a society to organise the marketing of home-grown hops in Great Britain, entered into an agreement with the defendant who was a hop-grower owning 63 acres of hop gardens, that he would so far as the hop crops of the years 1925 to 1929 were concerned, deliver to the Society all hops grown by him and that if, as regards the crops for these years he failed to deliver to the Society any hops produced by him, or in any other way than through the Society disposed of any hops produced by him, he would pay to the Society as liquidated damages the sum of £100 per acre. The 1926 crop was cultivated by the defendant in the usual way, but by a lease dated July 25, 1926, he let the 63 acres in question to a company, of which he had the control, for a term of five years from August 10, 1926, at a time when the hops were formed and pickable but had not been picked. An action was brought against him by the Society claiming damages for breach of contract. It was held (1) that as the defendant had grown or produced a hop crop up to the point when it was pickable and had then disposed of it to some other than the Society he had broken his contract with them; (2) that the agreement was not an unreasonable restraint of trade; and (3) that the £100 per acre being a "genuine covenanted pre-estimate of damage" was to be regarded as liquidated damages and not a penalty, and the Society were entitled to recover that amount.

4. *Rates and Taxes.*—In *Stephenson v. Waller* (44 Times L.R., 155) it was held that a farmer may be a "seller of milk" within rule 4 of the rules applicable to Case III of Schedule D of the Income Tax Act, 1918, even though he merely sells by wholesale the milk produced on his farm; and it is not necessary that to come within the rule, he should own some outside trading organisation for the sale of milk. The rule in question provides for a case where the lands charged under Schedule B and which are occupied by a dealer in cattle or a dealer in or a seller of milk, are insufficient for the keep of the cattle brought on to the lands, so that the assessable value for the purpose of Schedule B affords no just estimate of the profits. In such a case a further charge of tax may be made under Schedule D.

In the Irish case of *Dolan v. Joyce & Kirwan* ([1928], Ir.R. 539), it was held by the Supreme Court that an occupier of lands even though he be the owner is not liable for arrears of income tax under Schedule B of the Income Tax Act, 1918, which should have been levied upon and ultimately borne by the former occupier.

5. *Miscellaneous.*—*Loughrey v. Doherty* ([1928] Ir.R. 103) was an Irish case dealing with disturbance of a market. A

market had been established by Royal Patent on certain land belonging to M. L. who enclosed part of the land and built a market house thereon. No market tolls were leviable under the patent but a considerable income was derived by the owner of the market from the charges made for weighing the various commodities that came to the market. A practice arose among certain purchasers of commodities of intercepting the farmers as they came into the town on market days and of buying their produce from them before it reached the market. The produce so bought was sometimes taken to the market house to be weighed, but more often it was sent for that purpose to the railway station or to the stores of the purchasers with the result that the plaintiff's market was seriously affected. It was held that this constituted an actionable disturbance of the plaintiff's market entitling her to an injunction, for although no market tolls are chargeable by an owner of a market buyers can disturb, in an actionable sense, the market by buying outside it.

Att. Gen v. Ringwood Rural Council (26 L.G.R., 174) was a case relating to the pollution of a stream. Section 17 of the Public Health Act, 1875, prohibits a local authority from making or using any sewer for the purpose of conveying sewage or filthy water into any natural stream or water-course until such sewage or filthy water is freed from all excrementitious or other foul or noxious matter such as would affect or deteriorate the purity and quality of the water in the stream or water-course. It was held that if the purity and quality of the water in the stream or water-course is deteriorated at the point of discharge of a sewer it is not necessary to establish that deterioration has been caused to the stream generally. Owing to defects in the sewerage system sewage containing excrementitious and other matter had been discharged into a stream and polluted the water at the outfall and an injunction was granted against the local authority in favour of the Attorney General and an injunction in favour of the owner of the lands affected restraining them from discharging sewage at the outfall so as to cause a nuisance to the owner by reason of pollution of the stream.

Fenwick v. Huntingdon Rural Council (92 J.P., 41) related to a way which was claimed as a public footpath over the plaintiff's park. On a plan attached to an inclosure award of 1816 no such public footpath was shown and since that time down to 1901 the park had been in settlement with no one capable of dedicating a right of way to the public. The alleged footpath led from the public road over part of the carriage drive to the hall and then turned off through the park leading to only three farms and some cottages, saving by its use a distance of about 64 yards. The evidence of user was by the occupants of the

farms and cottages and their friends. It was held that the evidence of user was of user by sufferance only since 1816, before which no such public footpath was shown to exist. There was, therefore, no public highway proved.

With this case may be contrasted *Att. Gen. v. Tasker* (92 J.P., 157), where upon proof that a path had been used by the public on foot and on horseback as of right during the period of living memory and that such right was reported to exist theretofore back to the early part of last century it was held that the path was dedicated to the public as a bridleway at or about the commencement of or prior to the commencement of last century.

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AGRICULTURAL STATISTICS, 1928.

(The Society is again indebted to the Ministry of Agriculture and Fisheries for its kindness in supplying, for inclusion in the *Journal*, the usual detailed and comparative tables of the latest agricultural statistics. For fuller information than can be given in the limited space available here, the Department's own admirable series of Reports on Agricultural Statistics should, of course, be consulted.—Ed.)

ACREAGE.

PARTICULARS of the acreage under the principal crops and of the numbers of live stock are given in Table I.

A further slight diminution occurred in 1928 in the area under crops and grass on agricultural holdings above one acre in extent in England and Wales, the total of the figures returned by occupiers on June 4th amounting to 25,500,000 acres, or 85,000 acres (0·3 per cent.) less than in the previous year. For the past decade a steady and persistent fall has been recorded; the reduction during that period totalling 1,580,000 acres, or 5·8 per cent. On the other hand, the area devoted to "rough grazings" has been increasing, the latest acreage of 5,178,000 representing a rise of 52,000 acres on the year, following the addition of 62,000 acres in 1927. During the twelve months under review, therefore, the total area of land recorded as occupied for agricultural purposes did not show a fall of much more than 30,000 acres (0·1 per cent.).

The extent of land under crops accounted for the major portion of the reduction, the latest area of 10,110,000 acres

being 200,000 acres (1·9 per cent.) less than in 1927 and over a million acres below the average of the three pre-war years 1912-1914. A further increase occurred in the area under permanent grass, 15,390,000 acres being classified under that head, as compared with 15,280,000 acres in the previous year. On a proportionate basis, arable land bears the same relationship to the total area under cultivation as it did in 1927, viz., 40 per cent., so that in this respect the present position is not materially different from that of the years immediately before the war, when the corresponding figure was 41 per cent.

So far as the individual crops are concerned, *Wheat* not only failed to maintain the increased area recorded in 1927, but showed the large fall of 240,000 acres, or 14·7 per cent. The latest acreage of 1,396,000 is the smallest in any year on record, with the exception of 1895 and 1904, and is 390,000 acres (22 per cent.) below the average of 1912-14, and not much more than half that sown in 1918, when the Food Production Campaign was at its height. Most counties shared in the reduction, Norfolk and Lincolnshire being responsible for 20,000 acres and 27,000 acres respectively, and Yorkshire 33,000 acres.

Barley, however, more than made good the losses sustained in 1926 and 1927, last year's acreage of 1,185,000 representing a rise of 136,000 acres, or about 13 per cent. It will be remembered that the extent of land devoted to this cereal, after several consecutive small declines, fell sharply in 1926 to 1,148,000 acres. The latest total is, nevertheless, some 300,000 acres short of the 1912-14 average. It is perhaps not without significance that the counties which grew considerably less wheat last year figure prominently amongst those with an augmented barley acreage, Norfolk, Lincolnshire and Yorkshire between them accounting for 46 per cent. of the increase over the whole country.

The year under review failed to reveal any material revival in the growing of *Oats*, the 1,763,000 acres being only 12,000 acres (0·7 per cent.) greater than in 1927. This cereal occupies close on a quarter of a million acres less than in the three pre-war years, while as compared with the high level of 1918 the shrinkage amounts to over a million acres.

Taking the three principal cereal crops together, the total area allotted to them last year amounted to 4,343,000 acres, as against 4,436,000 acres in 1927—a reduction of 93,000 acres, or about 2 per cent. This compares with a loss of 168,000 acres or nearly 4 per cent. between 1926 and 1927. The corresponding pre-war average was computed at 5,290,000 acres, and that of 1918 at 6,838,000, or 18 per cent. and 36 per cent. respectively in excess of the latest figures.

Sowings of *Mixed Corn* occupied 119,300 acres, or 10,000 acres (0·9 per cent.) more than in the preceding year. but the

area under *Rye* declined by 5,500 acres (15 per cent.) to 30,500 acres.

Turning to the pulse crops, *Beans* were sown on only 170,000 acres, as compared with 201,700 acres in 1927, i.e., a loss of 32,000 acres, or rather more than 15 per cent., the latest total being appreciably below that recorded in any year during the past decade. The decrease was wholly in beans harvested as corn, the area picked green advancing by 800 acres on the year. A further falling-off took place in the extent of land devoted to *Peas*, the area returned, at 114,000 acres, representing a drop of 4,700 acres and was only about 1,300 acres above the record low level of 1916. As with beans, the loss was confined to that portion of the crop harvested as corn.

The two pulse crops together occupied 284,000 acres, or 36,400 acres (11.3 per cent.) less than in the previous year and 174,000 acres (38 per cent.) below the pre-war average.

Potatoes suffered a set-back last year, the area sown falling from 514,000 acres to 489,000 acres, i.e. by 25,000 acres (5 per cent.). Thus the increases recorded from 1924 to 1927, amounting to roughly 62,000 acres, have been partially offset, but the present acreage is nevertheless still some 30,000 acres (7 per cent.) greater than in the three years 1912-14.

Although the area under *Turnips* and *Swedes* advanced by 5,900 acres (0.8 per cent.) to 722,300 acres, the increase was not enough to effect any material improvement in the position of the crop, the latest acreage being a long way short of the pre-war average (1,060,000 acres), and 189,000 acres (roughly 20 per cent.) less than in 1918.

Last year witnessed a further reduction in the extent of land devoted to *Mangolds*, the area declining from 305,600 acres to 298,400 acres, or by 7,200 acres (2.4 per cent.). The last increase recorded was as far back as 1922, since when there has been a reduction of close on 125,000 acres.

It will be seen, therefore, that the total area occupied by the principal fodder roots in 1928 amounted to approximately 1,021,000 acres, as against 1,022,000 acres in 1927 and a pre-war average of over one and a half million acres.

Following a drop of about 2,600 acres in the area under *Hops* in 1927, a slight recovery took place last year, close on 800 extra acres (3.5 per cent.) being in cultivation. The latest figure of 23,800 acres compares with an average of 35,722 acres in 1912-14, or nearly 12,000 acres (33 per cent.) less. Since 1920, when the area returned was 21,002 acres, there have been no very marked extensions or diminutions, the extreme range of the annual totals during that period being no wider than from 23,000 acres to 26,450 acres. Of the 1928 total, 14,800 acres (62 per cent.) were in Kent, the next highest figure being the

3,740 acres (16 per cent.) in Hereford, followed by Sussex (2,150 acres or 9 per cent.), and Worcester, with 1,790 acres (8 per cent.). It is interesting to note that proportionately the different hop-growing areas bore the same relationship to one another as they did in 1927.

A reduction of 24,000 acres (1 per cent.) in the area under *Clover and Rotation Grasses* was recorded last year, the amount cut for hay falling by 18,000 acres and the area grazed by 6,000 acres. At 2,437,000 acres the latest total is only about 1 per cent. below the 2,467,000 acres of the three pre-war years and 20 per cent. greater than the average of the preceding decade (2,028,000 acres). The proportion of the permanent pasture mown was the same as in 1926, viz., 29 per cent., but was 1 per cent. greater than in 1927.

Sugar Beet, after being sown on a greatly increased acreage for several years in succession, suffered a reverse in 1928, the 175,700 acres recorded on June 4 being 47,000 (over 21 per cent.) fewer than twelve months earlier. Of the latest total, Norfolk contributed 41,100 acres (23 per cent.), Suffolk 30,100 acres (17 per cent.), Lincolnshire 23,125 acres (13 per cent.), and Yorkshire 12,100 (7 per cent.). It is interesting to note that the areas under this crop last year in the three principal counties, expressed as a percentage of the total area under crops in the county, are calculated at 5.5, 5.6 and 2.4 respectively, as compared with 6.9, 6.6 and 3.3 in 1927, and 4.3, 4.5 and 1.7 in 1926.

Of the minor crops, *Vetches and Tares* declined by 13,000 acres (16.2 per cent.) to 67,700 acres; *Lucerne* by 6,500 acres (14.8 per cent.) to 37,100 acres, and *Mustard for Seed* by 11,300 acres (29.7 per cent.) to 26,700 acres. *Brussels Sprouts*, however, advanced by 6,700 acres to 30,400 acres, *Cauliflowers* by 1,900 acres to 13,600 acres, and *Carrots* by 1,400 acres to 10,100 acres.

The area under small fruit showed a further shrinkage of 4,500 acres (6.5 per cent.) to 64,700 acres, but orchards occupied practically the same amount of land as in 1927, the aggregate of *Fruit* last year totalling 313,000 acres, or about 5,000 acres less on the twelve months.

LIVE STOCK.

For the seventh year in succession the number of *Horses* on farms showed a decline, the 1,038,500 returned on June 4th being 38,800 (3.6 per cent.) fewer than on the corresponding date twelve months earlier. Since 1921, there has been a drop in the figures of close on 350,000 (25 per cent.) while as compared with the pre-war average the latest total is lower by about 10 per cent. Unbroken horses accounted for approximately one-third of the most recent reduction, or about the same as in 1927,

but whereas in the latter year the falling-off in the number of foals was definitely less pronounced than in most other post-war years, there was a recrudescence of that feature of recent live stock returns in 1928, the 38,200 recorded representing a drop on the year of over 5 per cent. Horses used for agricultural purposes numbered 732,500, as against 746,200 in 1927, i.e., a reduction of 13,700, or 1·8 per cent. In the category of "other" horses, a further decline of 12,400 (6·8 per cent.) to 171,500 was recorded; over the previous twelve months there was a fall of as much as 18,000 (9 per cent.) to 183,900, but it has to be remembered that in 1926 the figures were somewhat inflated by the accommodation on farms of pit ponies during the coal-mining dispute.

The returns of the number of *Cattle* in 1928 revealed a decline of nearly a quarter of a million (4·0 per cent.), this being the first downward movement since 1921. The latest total of 6,026,000 is nevertheless about 67,000 (1 per cent.) greater than the average of the previous decade, and 214,000 (3·7 per cent.) above that of 1912-1914. Reductions took place in all counties except the four Northern ones, and were relatively the heaviest in the Eastern counties. It may be interesting to recall that from 1921 to 1927 nearly 470,000 cattle were added to the herds of this country. Last year's fall was spread over all classes, "other" cattle being responsible for roughly 180,000 (70 per cent.), while the smallest contribution was amongst cows in calf (5,300 or 1·7 per cent.). Heifers in calf were fewer by 32,000 (8·3 per cent.), so that the combined numbers of in-calf cattle shrunk by 37,300 (over 5 per cent.). The milking herds were depleted by 30,000 (1·4 per cent.).

In the case of *Sheep* also the variation in numbers between June 1927 and June 1928 was in an opposite direction from that experienced for some time past. Consistent annual additions to the flocks from 1923 onwards resulted in an aggregate increase of 3,237,000 (23 per cent.), until by 1927 the 17,072,000 recorded was the largest total for ten years. Last year, however, there was a reduction of over 683,000 (4 per cent.), bringing the figure to 16,390,000, or more than a million (6·3 per cent.) below the 1912-1914 average. The greatest proportional part of the loss occurred in the "other" sheep aged one year and above, the 2,379,000 returned being 246,000 (9 per cent.) fewer than in the preceding twelve months. "Other" sheep under one year declined by 307,000 (4·2 per cent.) to 6,982,000. The reduction in the number of breeding ewes was comparatively minor, the total falling from 6,962,000 to 6,837,000 or by 125,000 (1·8 per cent.).

Another sharp rise of 280,000 (10·3 per cent.) in the numbers of *Pigs* last year brought the total up to 2,971,000, which was

within 257,000 (8 per cent.) of the record of 1924, and 611,000 (26 per cent.) greater than the 1912-1914 average. The extent of the pig industry in England and Wales has shown some remarkable fluctuations since the war, an increase of over 800,000 occurring between 1918 and 1921, followed by the addition of a further 617,000 in 1924, after a temporary set-back of 207,000 in 1922, the number again falling (by nearly 450,000) between 1925 and 1926. The latest returns show a loss of 13,000 (3·3 per cent.) amongst breeding sows, in which most counties participated, other classes of pig gaining 292,000 (or about 13 per cent.).

PRODUCE OF CROPS.

Particulars of the production and yield per acre of the principal crops are given in Table II.¹

Wheat yielded particularly well in 1928 at 18·2 cwt. per acre, as compared with 17·4 cwt. in 1927 and a similar average for the previous ten years; in fact only once since the war has a better figure been reached, the yield in 1918 amounting to 18·3 cwt. per acre. On account of the heavy reduction in acreage (240,000 acres), however, the total production came out at only 1,266,000 tons, or 157,000 tons (11 per cent.) less than in 1927 and 368,000 tons (22 per cent.) below the 1914 figure. The latest output was, moreover, less than in any post-war year.

Barley also gave a very satisfactory yield last year, the 17·3 cwt. recorded being 0·7 cwt. in excess of the 1927 yield and as much as 1·5 cwt. above the ten-year average. The improvement was general throughout the country, only three counties showing a falling-off, while in a number of areas the increase over the 1918-1927 average amounted to more than 3 cwt. per acre. In the case of this cereal, however, the area sown rose by 136,000 acres on the year, resulting in a total production of 1,019,000 tons, or 157,000 tons (18 per cent.) greater than in 1927 and 103,000 tons (11 per cent.) in excess of the 1926 level.

The yield of *Oats* came out at the very satisfactory figure of 16·6 cwt. per acre as against 15·6 cwt. in the preceding year and a ten-year average of 14·2 cwt., the increases being most prominent in the Northern and North-western divisions of England and in North Wales. On a slightly augmented acreage, therefore, the total output rose by about 100,000 tons to 1,443,000 tons, thus nearly making good the loss of 146,000 tons sustained in 1927, and exceeding the pre-war average by 155,000 tons (12 per cent.).

The aggregate production of the three main cereal crops

¹ Although the table includes particulars for Scotland, exigencies of space make it necessary for this review to be confined to England and Wales.

during the period under review amounted to 3,728,000 tons, as compared with 3,629,000 tons and 3,710,000 tons respectively in 1927 and 1926, but was nevertheless half a million tons (12 per cent.) under the 1912-14 average.

Beans failed to maintain the higher yield recorded in 1927, falling from 17.2 cwt. per acre to 16.6 cwt.—a drop of 0.6 cwt. or 3.5 per cent, the average of the previous ten years being slightly smaller at 16.2 cwt. As the crop was sown on about 32,000 less acres, the total produce showed the substantial decline of over 30,000 tons (20 per cent.).

Peas, however, did exceptionally well last year, yielding 15.9 cwt. to the acre, or 2.7 cwt. (20 per cent.) above the 1927 figure and 1.9 cwt. (14 per cent.) more than in the preceding ten years. Notwithstanding a decreased acreage, the out-turn, at 55,000 tons, was 4,400 tons (over 8 per cent.) greater.

The yield of *Potatoes* was outstandingly good at 7.3 tons per acre, as against 5.9 tons in the previous year and a ten-year average of 6.1 tons, and in spite of a loss of close on 30,000 acres in the area planted, the total out-turn rose by over 450,000 tons (15 per cent.) to 3,512,000 tons. This is the largest amount recorded since 1922, when 4,012,000 tons were produced, and is far above the 2,700,000 tons of 1912-14. Norfolk yielded about 10 tons to the acre, or 3 tons in excess of the county average, while in the Holland division of Lincolnshire the 9 tons recorded represented an increase of about $2\frac{1}{2}$ tons.

In the case of *Turnips and Swedes* the rise of about 6,000 acres in the area sown was accompanied by a better yield, the figure coming out at 13.8 tons per acre, or 1.7 tons (14 per cent.) and 1.4 tons (11 per cent.) respectively above the averages for 1927 and the preceding decade. Total production amounted to 9,954,000 tons as against 8,630,000 tons in the earlier twelve months, i.e. a gain of 1,324,000 tons (15 per cent.), but when compared with the pre-war level, a drop of over three million tons (24 per cent.) is revealed.

Mangolds also did well last year, yielding 19.4 tons per acre, or 1.4 tons in excess of the 1927 yield, and slightly above the ten-year average. On a reduced acreage, the total output amounted to 5,755,000 tons, as against 5,448,000 tons in 1927, 8,231,000 tons in 1918, and 7,919,000 tons in 1914.

The yield of *Seeds Hay* was 27.9 cwt. per acre, as compared with 26.6 cwt. in 1927 and an average of 28.3 cwt. during the preceding ten years, the South-eastern and South-western divisions of England showing more satisfactory results. The total produce was 35,000 tons higher at 2,143,000 tons. *Meadow Hay*, however, at 19 cwt. per acre, yielded about one-third cwt. less on the year and 1.6 cwt. less as compared with the 1918-1927 average. As, however, the area cut advanced by 183,000 acres,

the total output increased by 19,000 tons to 4,276,000 tons. The aggregate crop from both kinds of hay amounted to 6,419,000 tons, or 154,000 tons (2·5 per cent.) more than in 1927, but as much as 1,729,000 tons (21 per cent.) below the pre-war level.

It will be seen from Table III that taking England as a whole, the yield of *Hops* last year at 10·2 cwt. per acre was less than in 1927, and well below the average of the previous decade. Results were very dissimilar in different counties, Hampshire and Surrey returning above-average yields, while the figures for Kent, Hereford and Worcester were appreciably lower. In spite of a slight increase in acreage the total output of 242,100 cwt. represented a fall for the fourth year in succession, the decline since 1924 amounting to over 200,000 cwt. (45 per cent.). Hereford lost as much as 11,000 cwt. (27 per cent.) and Worcester 4,200 cwt. (25 per cent.), but the 162,000 cwt. produced in Kent was practically the same as in 1927, while the out-turn in Hampshire rose by 3,600 cwt. (40 per cent.) to 12,500 cwt.

PRICES.

On the basis of the index numbers prepared and published by the Ministry of Agriculture and Fisheries, prices of agricultural produce last year recovered a little from the set-back experienced during the previous twelve months, the average for the year being calculated at 47 per cent. above the level of the base period 1911-13 as compared with 44 per cent. in 1927, 51 per cent. in 1926, 59 per cent. in 1925, 61 per cent. in 1924 and 57 per cent. in 1923. The rise in the 1928 index figure was due in the main to the higher prices realised for fat cattle and sheep, and to a lesser extent for dairy produce, poultry and wool. On the other hand, the indices for wheat, barley and fat pigs were substantially lower on the year.

Tables IV and V give the average prices of *British Corn* during each week of 1928 and the annual averages over the past ten years. *Wheat* during 1928 averaged 10s. per cwt. or 1s. 6d. less than in 1927, and the index number, at 32 per cent. above the base period, was 20 points lower, the corresponding figures for the previous three years being 52 per cent, 64 per cent. and 60 per cent. respectively. Whereas during the first five months of 1927 prices ranged from 11s. 6d. to 11s. 11d. per cwt., the 10s. mark was not reached last year until the end of March; from that point onwards steady increases took place until the middle of May, when the best price of the year, viz. 11s. 3d. per cwt. for the old crop, was obtained. Values subsequently fell away, and by the end of December transactions in respect of the new crop were being effected at an average of 9s. 6d., which compares with 9s. 10d. in the corresponding week of 1927. The difference

between the highest peaks reached in the two years amounted to 1s. 6d. per cwt., or precisely the extent of the annual loss. In the case of *Barley*, the annual average price was computed at 11s. per cwt. as against 11s. 9d. in 1927 and 10s. 4d. in 1926, the index figure being calculated at 39 per cent. in excess of pre-war, or 9 points lower and 8 points higher respectively than in the two preceding years. Prices during January were higher than in the corresponding month of 1927, but thereafter, with a few exceptions, a lower level was in evidence. The top figure of 14s. 1d. recorded during the last week in August was no more than 2d. less than the highest price reached in 1927, but by the end of the year the average was only 10s. 2d. per cwt. as against 11s. 4d.—a reduction of 1s. 2d. per cwt. or 10 per cent. With the exception of the closing three months, *Oats* commanded better prices in practically every week of 1928 than in 1927, the annual average coming out at 10s. 5d. per cwt. as against 9s. 1d., i.e. a rise on the year of 1s. 4d. per cwt. or 13 per cent. Commencing at 9s. 4d. per cwt. values gradually rose until by the last week in May they stood at 13s. 1d., which compares with a top price of 10s. 4d. over the previous twelve months. Towards the end of August quotations declined on the marketing of the new crop, and the year ended with an average of 8s. 11d. as against 9s. 3d. in 1927. The annual index figure was calculated at 47 per cent. above the base period, as compared with 28 per cent. in 1927 and 27 per cent. in 1926.

The year under review witnessed a distinct revival in *Fat Cattle* prices, the index number being 38 per cent. above pre-war as compared with the very low level of 27 per cent. in 1927, 41 per cent. in 1926, 51 per cent. in 1925, and 53 per cent. in 1924. The monthly average prices of fat stock and milking cows are shown in Table VI, while Table VII gives the ten-year averages for the various classes.

First quality Shorthorns sold at an average of 50s. 6d. per live cwt. in January as compared with 51s. 10d. in the corresponding month of the preceding year, but whereas in 1927 values rose very slowly to a maximum of 53s. 4d. in June, the figure reached in the same month of last year was 63s. 4d., i.e. an increase of 10s. per live cwt. or nearly 20 per cent. From that point onwards they fell away, until by November the average stood at 50s. 2d. per live cwt., the year closing with an addition of 2s. 4d. to 52s. 6d., on account of the advanced prices commanded by the better class of animals offered at the Christmas Fat Stock Shows. Taking 1928 as a whole, best Shorthorns realised 12s. 1d. per stone (14lb.) dead weight and secondary descriptions 10s. 10d. as against 11s. 1d. and 9s. 11d. respectively in the previous twelve months. The best class of Herefords did not sell quite so well as Shorthorn cattle, the peak price being the 62s. 5d. per live

cwt. realised in May, while the annual average came out at 54s. 5d. per live cwt. or 11s. 11d. per stone dead weight. On the other hand, secondary grades made rather more money than Shorthorns, fetching on an average for the whole year 49s. 7d. per live cwt. or 11s. 3d. per stone, i.e. only 8d. per stone less than first quality beasts. As is usually the case, quotations for Devons were on a higher level than those for the other types of cattle, first and second quality animals averaging 56s. 8d. and 49s. 7d. respectively per live cwt., or 12s. 5d. and 11s. 3d. per stone dead weight, which compares with 11s. 7d. and 10s. 10d. in 1927, or 16 and 13 per cent. respectively more. Fat cows, at an annual average of 40s. 10d. and 33s. respectively per live cwt. for first and second quality beasts, were about 11 to 12 per cent. more remunerative than a year before, the peak month being May with values of 46s. 11d. and 38s. as against the 38s. 9d. and 31s. 5d. of January, 1927.

The period under review brought better prices also to vendors of *Milking Cows*. In the case of Shorthorns in milk values for first quality beasts were higher in every month than in 1927 except January, while secondary descriptions made more money throughout the entire year. At £30 8s. and £24 15s. respectively per head the annual averages were £1 7s. (4·6 per cent.) and £1 12s. (6·9 per cent.) higher. Best calves reached their maximum of £29 11s. per head in November and secondary sorts theirs of £24 15s. in May, these sums comparing with £29 1s. and £23 9s. respectively in 1927—the highest monthly averages recorded in that year. Taking 1928 as a whole, the average prices of £27 9s. and £23 4s. per head represented increases on the year of 6s. and 12s. per head. It is noteworthy that the latest movement is the first to occur in an upward direction since 1924, when the persistent downward trend of prices from 1920 onwards received a slight, but temporary, check.

Quotations for *Veal Calves* recovered from the additional set-back they received in 1927, an advance of $\frac{1}{2}$ d. being recorded to an average over the year of 13 $\frac{1}{2}$ d. per lb. for first quality calves and 11 $\frac{1}{2}$ d. per lb. for secondary sorts. During no month did the best animals realise less than 12d. per lb., whereas twice in the preceding year a lower figure was reached.

Fat Sheep changed hands at comparatively good prices during the period under review, averaging 67 per cent. above 1911–13 as against 50 per cent. in 1927 and 57 per cent. in 1926. First quality Downs made up to 16 $\frac{3}{4}$ d. per lb. as compared with a top figure of 15d. in the preceding year, while the best Longwools fetched 15 $\frac{1}{2}$ d. in May as against a maximum of 13 $\frac{1}{2}$ d. in April, 1927. Averaged over the twelve months, both classes of Downs sold at an advance of 1 $\frac{1}{4}$ d. to 14 $\frac{3}{4}$ d. per lb. and 12 $\frac{3}{4}$ d. per lb., while Longwools at 13 $\frac{1}{2}$ d. and 12d. respectively per lb. gained from

1½d. to 1½d. In the case of Crossbreds values were a shade higher than those for other classes of fat sheep for the first three months of the year, but subsequently ruled on a slightly lower level, the annual averages coming out the same as for Downs, but representing a rise of 1½d. per lb. for both qualities.

Last year was a bad one from the point of view of pig prices, the index number for baconers falling by 9 points to 35 per cent. above the base years 1911-13 and for porkers by 17 points to 38 per cent. Since 1926 a very heavy drop has occurred, for in that year baconers averaged 80 per cent. over pre-war and porkers 84 per cent. As regards the annual prices, these were, with only one exception, lower than at any time during the past ten years. Although bacon pigs did not touch quite such a low level as in 1927, reduced quotations were in evidence for the first seven months, resulting in an annual average of 10s. 5d. per stone dead weight for first quality animals and 9s. 5d. for secondary descriptions, as against 11s. 1d. and 10s. 1d. respectively in the previous year, i.e. a drop of from 6 to 7 per cent. Porkers suffered even more severely, for in July the best class were sold for as low as 10s. 10d. per stone and second quality animals for 9s. 9d., the average over the whole year being 11s. 4d. and 10s. 3d. respectively, or 1s. 3d. (from 11 to 12 per cent.) less than in 1927. It is interesting to observe that whereas in 1927 about 3s. 2d. per stone separated the highest and lowest prices for both bacon and pork pigs, last year the difference was as little as from 1s. to 1s. 4d.

As regards other agricultural commodities, a considerable rise occurred in wool prices, the average being 76 per cent. above the base period as compared with 37 per cent. in 1927 and 20 per cent. in 1926. Potatoes averaged 71 per cent. in excess of pre-war, representing a fall of 3 points on the year, while the index figure for fruit rose 14 points to 83 per cent. The general level of milk prices was not materially changed, but cheese and butter became substantially dearer at 73 per cent. and 51 per cent. respectively above 1911-13. Eggs gained a point to 46 per cent. over the base level, while poultry prices advanced from 39 per cent. to 49 per cent. Quotations for hay averaged 11 per cent. above pre-war, as compared with 8 per cent. in 1927, 7 per cent. in 1926, and 1 per cent. in 1924 and 1925.

Although *Feeding Stuffs and Fertilisers* have not been dealt with in previous articles, a few remarks on the price movement last year might with advantage be added. Feeding stuffs continued to rise in price in 1928, the general level advancing by 15 points to 54 per cent. above 1911-13 as compared with 52 per cent. in 1925 and 25 per cent. in 1926. While practically all descriptions became a little dearer, maize and oilcakes contributed mostly to the increase. Imported feeding barley and

barley meal, however, were slightly reduced in price. The index number for fertilisers as a whole, at 2 per cent. below pre-war, was the lowest level reached since 1914; in 1927 it stood at 10 per cent., and in 1926 at 13 per cent. in excess of the base period. Nitrate of Soda, which in 1927 was calculated at 20 per cent. above 1911-13, realised on average £2 per ton less the following year, and the index figure fell to only 1 per cent. above the base period. Sulphate of Ammonia was reduced by about 18s. per ton, while the index for basic slag fell by 26 points to 19 per cent. above pre-war. Kainit was a little more costly to buy, but superphosphate became 4s. 6d. per ton cheaper on the year.

IMPORTS.

Table VIII gives the quantities and declared values of imports of the principal agricultural commodities into Great Britain and Northern Ireland in 1927 and 1928. Although for the purposes of comparison with pre-war trade the annual average imports during the three years 1911-1913 are shown in the Table, those figures relate to imports into the United Kingdom as a whole and thus include direct imports to what is now the Irish Free State. It must also be kept in view that the imports into Great Britain and Northern Ireland in 1927 and 1928 included supplies from the Free State, and consequently comparisons between the figures for these years with those for 1911-1913 are apt to be misleading, especially in the case of certain commodities, such as pork, butter and eggs.

Grain and Meal.

Following an increase of some 700,000 tons in the total imports of *Wheat* between 1926 and 1927, arrivals last year declined by close on 350,000 tons (6 per cent.) to 5,179,000 tons. The United States of America consigned only 1,183,000 tons as against 1,781,000 tons in the preceding twelve months, while Australia and India also sent appreciably less. On the other hand, imports from Canada amounted to 2,050,000 tons as compared with 1,609,000 tons in 1927, i.e., an increase of over 25 per cent., while those from the Argentine rose by 247,000 tons to 1,220,000 tons. A comparison with 1924—a year of unusually heavy shipments—shows that last year's figures were lower by a little under 700,000 tons, or 12 per cent. As regards the declared values, a decrease of £10,430,000 (15 per cent.) was recorded, bringing the total to £57,630,000, the average value per ton coming out at only £11, as against £12 in 1927 and £13 in 1926.

TABLE I.—Acreage under Crops and Grass; and Number of Live Stock on the 4th June, 1928, and 4th June, 1927, in England and Wales.

	England (excluding Monmouth)		Wales (including Monmouth)	
	1928	1927	1928	1927
Total Area (excluding Water)	Acres 32,036,089		Acres 5,098,878	
Total Acreage under Crops and Grass ¹ . .	22,739,469	22,812,256	2,765,783	2,778,074
Arable Land	9,478,665	9,654,305	635,080	655,782
Permanent Grass for Hay	3,888,937	3,705,786	611,228	611,561
" " not for Hay	9,376,867	9,452,165	1,519,477	1,510,731
Rough Grazings	3,534,601	3,494,521	1,043,337	1,681,430
Wheat	1,374,942	1,610,203	20,601	25,777
Barley	1,139,331	1,008,256	45,172	45,670
Oats	1,595,757	1,577,270	166,959	173,876
Mixed Corn	99,182	90,154	20,121	19,082
Rye	30,307	35,767	199	185
Beans	169,154	200,801	817	862
Peas	113,540	118,807	468	445
Potatoes	466,629	490,637	22,390	23,250
Turnips and Swedes	680,387	673,090	41,876	43,224
Mangold	287,686	294,631	10,709	10,953
Sugar Beet	175,642	222,314	192	252
Cabbage for Fodder, Kohl Rabi and Rape .	113,455	118,597	11,487	12,367
Vetches or Tares	67,271	80,302	394	423
Lucerne	36,945	43,411	159	152
Hops	23,805	23,004	—	—
Small Fruit ²	63,952	68,336	769	818
Orchards	243,005	243,431	5,374	5,274
Clover, Sainfoin and Grasses under Rotation for Hay	1,396,724	1,406,856	171,219	179,317
Clover, Sainfoin and Grasses under Rotation, not for Hay	760,026	767,388	108,981	107,831
Other Crops	202,419	202,138	2,680	2,580
Bare Fallow	468,346	419,277	4,789	4,166
Horses used for Agriculture, ³	No. 651,620	No. 663,729	No. 80,890	No. 82,479
Stallions being used for Service	2,228	2,276	772	898
Unbroken Horses { One year and above	76,113	85,432	17,178	18,229
Under one year	29,094	31,141	9,067	9,073
Other Horses on Agricultural Holdings	147,963	158,969	23,540	24,945
TOTAL HORSES	907,013	941,597	131,447	135,624
Cows and Heifers in Milk	1,794,997	1,820,501	271,486	275,886
Cows in Calf but not in Milk	270,339	274,657	31,435	32,402
Heifers in Calf	325,231	351,672	30,000	35,585
Bulls being used for Service	70,859	76,514	11,253	11,891
Other Cattle { Two years old and above	842,707	889,496	83,273	81,974
One year and under two	979,736	1,039,815	195,220	186,683
Under one year	924,507	993,788	196,390	204,876
TOTAL OF CATTLE	5,208,376	5,446,443	818,057	828,797
Ewes kept for Breeding	5,011,807	5,076,437	1,825,105	1,885,705
Rams and Ram Lambs to be used for service .	139,213	142,629	52,278	53,722
Other Sheep { One year and above	1,603,870	2,033,782	575,907	591,500
Under one year	5,434,786	5,587,796	1,547,194	1,700,704
TOTAL OF SHEEP	12,389,126	12,840,644	4,000,484	4,231,631
Sows kept for Breeding	345,295	355,740	34,768	37,194
Boars being used for Service	24,666	24,106	1,555	1,418
Other Pigs	2,354,698	2,074,407	210,060	198,649
TOTAL OF PIGS	2,724,659	2,454,253	246,384	237,261

¹ Not including Rough Grazings.² Including Small Fruit in Orchards, which in 1923 totalled 30,240 acres in England and 226 acres in Wales.³ Including Mares kept for Breeding.

TABLE II.—Total Produce, Acreage and Yield per
(a) in 1928 and 1927, with the Average

Crops	Total Produce		Acreage		Yield per Acre		Average of the Ten Years 1918-1927
	1928	1927	1928	1927	1928	1927	
WHEAT							
*England . . .	Tons 1,250,000	Tons 1,404,000	Acres 1,374,928	Acres 1,610,152	Cwt. 18.2	Cwt. 17.4	Cwt. 17.4
†Wales . . .	16,000	19,000	20,601	25,777	15.4	14.9	14.9
Scotland . . .	62,000	65,000	58,227	66,577	21.2	19.6	21.2
GREAT BRITAIN .	1,328,000	1,488,000	c 1,453,756	c 1,702,506	18.3	17.5	17.5
BARLEY ^b							
*England . . .	986,000	832,000	1,189,809	1,003,216	17.8	16.6	15.1
†Wales . . .	33,000	30,000	45,172	45,670	14.6	13.8	13.1
Scotland . . .	108,000	94,000	111,924	117,369	18.4	16.1	17.4
GREAT BRITAIN .	1,122,000	956,000	c 1,296,905	c 1,166,255	17.3	16.4	15.3
OATS							
*England . . .	1,326,000	1,234,000	1,595,451	1,576,814	16.6	15.6	14.2
†Wales . . .	117,000	110,000	166,959	173,823	14.0	12.7	11.1
Scotland . . .	704,000	620,000	878,436	897,870	16.0	13.8	14.5
GREAT BRITAIN .	2,147,000	1,964,000	c 2,640,846	c 2,648,007	16.3	14.8	14.1
BEANS							
*England . . .	130,000	162,700	156,915	189,247	16.6	17.2	16.2
†Wales . . .	500	500	587	617	16.7	15.4	15.3
Scotland . . .	3,000	3,000	3,151	3,574	18.9	16.9	18.4
GREAT BRITAIN .	133,500	166,200	d 160,653	d 193,438	16.6	17.2	16.3
PEAS							
*England . . .	54,950	50,500	69,180	76,683	15.9	13.2	14.0
†Wales . . .	70	100	103	132	12.2	10.9	10.9
Scotland . . .	8	13	17	35	9.0	7.2	10.1
GREAT BRITAIN .	55,028	50,613	d 69,305	d 76,850	15.9	13.2	14.0

* Excluding Monmouth.

† Including Monmouth.

(a) The particulars for Scotland have been furnished by the Board of Agriculture for Scotland.

(b) Including Bera.

(c) Exclusive of a certain area (amounting in 1928 to 14 acres of Wheat, 22 acres of Barley, and 306 acres of Oats) the produce of which was cut green.

(d) Exclusive of a certain area (amounting in 1928 to 12,469 acres of Beans, and 45,049 acres of Peas) the produce of which was cut or picked green.

*Acre of each of the Principal Crops in Great Britain
yield per acre of the Ten Years 1918-1927.*

Crops	Total Produce		Acreage		Yield per acre		Average of the Ten Years 1918-1927
	1928	1927	1928	1927	1928	1927	
POTATOES	Tons	Tons	Acres	Acres	Tons	Tons	Tons
*England . . .	3,385,000	2,938,000	466,629	490,697	7·3	6·0	6·1
†Wales . . .	127,000	117,000	22,390	23,250	5·7	5·0	5·3
Scotland . . .	1,032,000	799,000	144,026	147,184	7·2	5·4	6·5
GREAT BRITAIN .	4,544,000	3,854,000	633,045	661,131	7·2	5·8	6·1
TURNIPS AND SWEDES							
*England . . .	9,344,000	8,098,000	678,339	671,357	13·8	12·1	12·4
†Wales . . .	609,000	532,000	41,876	43,224	14·5	12·3	13·0
Scotland . . .	6,660,000	5,937,000	378,003	376,693	17·6	15·8	16·6
GREAT BRITAIN .	16,613,000	14,567,000	e 1,098,218	e 1,091,274	15·1	13·3	13·8
MANGOLDS							
*England . . .	5,570,000	5,276,000	286,924	293,627	19·4	18·0	19·0
†Wales . . .	185,000	172,000	10,709	10,953	17·3	15·7	16·4
Scotland . . .	21,800	20,400	1,250	1,124	17·3	13·1	13·0
GREAT BRITAIN .	5,776,600	5,468,400	f 298,883	f 305,704	19·3	17·9	18·9
HAY from CLOVER, SAINFOIN, &C.							
*England . . .	1,947,000	1,887,000	1,396,724	1,406,856	27·9	26·8	28·4
†Wales . . .	195,000	221,000	171,219	179,317	22·7	24·7	24·3
Scotland . . .	627,000	647,000	400,753	399,672	31·3	32·4	31·5
GREAT BRITAIN .	2,769,000	2,755,000	1,968,696	1,985,845	28·1	27·7	28·7
HAY from PERMANENT GRASS.							
*England . . .	3,742,000	3,584,000	3,888,937	3,705,786	19·2	19·3	20·8
†Wales . . .	534,000	573,000	611,228	611,561	17·5	18·7	18·9
Scotland . . .	257,000	267,000	166,300	167,212	31·0	31·9	30·8
GREAT BRITAIN .	4,533,000	4,424,000	4,666,463	4,484,559	19·4	19·7	20·9

* Excluding Monmouth.

† Including Monmouth.

(e) Exclusive of a certain area (amounting in 1923 to 2,048 acres of Turnips and Swedes) on which the crops were grown for the production of seed.

(f) Exclusive of a certain area (amounting in 1923 to 762 acres) on which the crops were grown for the production of seed.

TABLE III.—Hops :—Total Acreage, Produce and Yield per Acre in 1928 and 1927, in each County of England in which Hops were grown; and the Average Yield of the Ten Years 1918-1927.

Counties	Acreage		Total Produce		Yield per Acre		Average of the Ten Years 1918-27
	1928	1927	1928	1927	1928	1927	
	Acres	Acres	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
TOTAL FOR ENGLAND	23,762	23,004	242,100	255,500	10.2	11.1	11.7
Kent { East.	3,280	3,173	41,000	41,000	12.6	12.9	13.1
Mid.	4,944	4,790	58,000	55,000	11.6	11.5	13.5
Weald	6,583	6,329	63,000	68,000	9.6	10.7	11.9
Total Kent	14,807	14,292	162,000	164,000	10.9	11.5	12.7
Hampshire	987	948	12,500	8,900	12.7	9.4	10.7
Surrey	158	150	1,800	1,600	11.5	10.8	10.6
Sussex	2,146	2,149	22,000	22,000	10.1	10.3	11.2
Hereford	3,739	3,593	30,000	41,000	8.2	11.3	9.4
Worcester	1,794	1,773	12,800	17,000	7.1	9.8	9.8
Other Counties *	131	99	1,000	1,000	7.6	10.1	8.3

* Salop, Gloucester and Berkshire.

TABLE IV.—Average Prices of British Corn per cwt. (of 112 Imperial Standard lb.)¹ in England and Wales, as ascertained under the Corn Returns Act, 1882, and the Corn Sales Act, 1921, in each week of the Year 1928.

1928 Received in the Week Ended		Wheat	Barley	Oats
		s. d.	s. d.	s. d.
January	7	9 10	11 1	9 4
"	14	9 11	11 4	9 5
"	21	9 11	11 2	9 7
"	28	9 11	11 3	9 11
February	4	9 10	11 0	10 0
"	11	9 9	10 11	10 1
"	18	9 6	10 10	10 3
"	25	9 4	10 9	10 3
March	3	9 6	10 8	10 4
"	10	9 7	10 8	10 6
"	17	9 9	10 8	10 7
"	24	9 10	10 10	10 9
"	31	10 0	10 11	11 0
April	7	10 1	11 0	11 2
"	14	10 1	10 9	11 5
"	21	10 3	10 9	11 9
"	28	10 5	11 1	12 2
May	5	10 10	11 0	12 10
"	12	11 2	10 10	12 11
"	19	11 3	11 0	12 11
"	26	11 2	10 8	13 1

¹ Section 8 of the Corn Returns Act, 1882, as amended by Section (2) of the Corn Sales Act, 1921, provides that in the weekly summary of quantities and prices each sort of British Corn shall be computed with reference to the hundredweight of one hundred and twelve imperial standard pounds.

TABLE IV—continued.

1928 Received in the Week Ended		Wheat	Barley	Oats
		s. d.	s. d.	s. d.
June	2	11 2	10 10	12 11
"	9	11 0	10 11	13 0
"	16	11 0	11 2	12 9
"	23	10 10	10 10	12 7
"	30	10 9	10 8	12 5
July	7	10 9	10 3	12 2
"	14	10 9	10 2	12 5
"	21	11 0	10 5	12 1
"	28	10 11	10 5	11 9
August	4	10 11	10 9	11 4
"	11	10 9	10 7	11 2
"	18	10 4	12 10	9 10
"	25	9 9	14 0	9 4
September	1	9 5	14 1	9 3
"	8	9 3	13 8	9 2
"	15	9 2	12 4	9 0
"	22	9 2	11 4	9 1
"	29	9 1	11 1	8 10
October	6	9 2	10 10	8 10
"	13	9 5	10 10	8 8
"	20	9 8	10 9	8 8
"	27	9 9	10 10	8 10
November	3	9 9	10 10	8 10
"	10	9 11	10 10	8 11
"	17	9 11	10 7	9 1
"	24	9 11	10 5	9 1
December	1	9 10	10 7	9 2
"	8	9 9	10 5	9 1
"	15	9 7	10 2	9 2
"	22	9 6	10 2	9 0
"	29	9 6	10 2	8 11
Average for the year . .		10 0	11 0	10 5

TABLE V.—Annual Average Prices per cwt. (of 112 Imperial Standard lb.) of British Wheat, Barley and Oats, in England and Wales, in each year from 1919 to 1928, as ascertained under the Corn Returns Act, 1882, and the Corn Sales Act, 1921.

Year	Annual Average Price per cwt.		
	Wheat	Barley	Oats
	s. d.	s. d.	s. d.
1919	17 0	21 2	18 9
1920	18 10	25 0	20 5
1921	16 8	14 7	12 3
1922	11 2	11 2	10 5
1923	9 10	9 5	9 7
1924	11 6	13 1	9 9
1925	12 2	11 9	9 9
1926	12 5	10 4	9 0
1927	11 6	11 9	9 1
1928	10 0	11 0	10 5

TABLE VI.—Monthly Average Prices of Fat Stock and Milking Cows in England and Wales during the Year 1928.

Description.	Quality	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Per cwt. live weight														
FAT CATTLE:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Shorthorns	1	50	6 52	3 55	3 59	4 62	9 63	4 58	2 54	1 51	11 50	0 50	2 52	6 55 0
	2	43	7 45	5 48	4 61	10 54	8 54	10 50	10 47	1 45	1 43	2 43	2 44	11 47 9
Herefords ¹	1	49	2 51	10 55	3 60	1 62	5 62	1 56	11 53	2 51	0 49	11 49	8 51	1 54 5
	2	44	9 47	4 51	0 55	4 57	2 56	2 52	6 48	1 46	8 44	11 45	0 46	3 49 7
Devons ¹	1	49	5 52	2 56	5 60	11 63	3 62	10 58	10 56	3 54	8 53	2 54	10 57	3 56 8
	2	43	5 45	11 48	7 53	3 55	3 55	0 52	2 49	10 47	10 47	4 47	6 49	5 49 7
Fat Cows.	1	37	0 38	11 41	7 44	6 46	11 46	1 42	1 39	11 39	1 37	5 37	10 39	0 40 10
	2	29	10 31	10 33	9 36	2 38	0 37	7 34	3 32	1 31	4 30	0 30	2 30	11 33 0
Per head														
MILKING COWS		£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Shorthorns	1	28	18 29	7 29	4 29	16 29	15 29	4 29	19 30	0 30	18 32	11 33	0 32	5 30 8
in Milk.	2	23	14 24	8 23	19 24	5 24	5 24	0 24	9 24	8 25	0 26	5 26	8 25	17 24 15
Calvers	1	25	10 25	13 26	2 26	8 27	1 26	16 28	1 27	15 28	8 29	9 29	11 28	13 27 9
	2	21	14 22	11 22	8 22	5 24	15 22	18 23	9 23	9 23	11 24	2 23	19 23	12 23 4
Per lb.														
VEAL CALVES	1	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
	2	12½	13½	14	14½	14½	14½	13½	13½	13	12½	13	13½	13½
FAT SHEEP:		d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Downs	1	14	14½	15½	16½	16½	15½	14½	14	13½	13½	14	14½	14½
	2	12½	12½	13½	14½	14½	13½	12½	12	12	11½	12	12½	12½
Longwools	1	13½	14	14½	15½	15½	14½	13½	12½	12½	12½	12½	13	13½
	2	12	12½	13	13½	13½	12½	11½	11	11	10½	11	11½	12
Crossbreds	1	14½	15	15½	16½	16½	15½	14	13½	13½	13½	13½	14½	14½
	2	12½	12½	13½	14½	14½	13½	12	11½	11½	11½	11½	12½	12½
Per stone dead weight														
FAT PIGS:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bacon Pigs	1	10	1 10	5 10	10 10	11 10	8 10	9 10	9 10	9 10	5 9	11 9	8 9	10 10 5
	2	8	11 9	5 9	10 10	0 9	10 9	9 9	9 9	9 9	6 9	0 8	8 8	10 9 5
Porkers	1	11	8 11	8 11	11 11	10 11	2 11	0 10	10 10	11 11	0 11	0 11	2 11	7 11 4
	2	10	5 10	6 10	9 10	9 10	3 9	9 11	9 9	9 10	0 10	1 10	2 10	5 10 3

¹ The prices of Herefords and Devons are based on a comparatively small number of quotations.

TABLE VII.—Yearly Average Prices of Fat Stock and Milking Cows in England and Wales during the Years 1919–1928.

Description	Quality	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Per stone dead weight											
FAT CATTLE:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Shorthorns	1	18 4 21	9 19	10 14	9 13	6 13	7 18	4 12	7 11	1 12	1
	2	18 4 20	9 18	0 12	10 11	11 12	0 11	10 11	2 9	11 10	10
Herefords ¹	1	18 4 21	9 19	8 14	3 13	3 13	3 13	3	—	11 1 11	11
	2	18 4 21	1 —	12 10	11 9	12 4	12 2	—	10 5	11 3	3
Devons ¹	1	18 4 21	10 20	4 15	0 13	9 13	10 13	10 13	2 11	7 12	5
	2	18 4 21	3 18	10 18	5 12	4 12	2 12	6 12	1 10	10 11	3
Per head											
MILKING COWS:		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Shorthorns in Milk .	1	52 11 81	6 54	13 39	3 36	6 36	9 34	9 31	19 29	1 30	3
	2	39 3 48	9 41	19 30	8 28	8 28	19 26	15 25	0 23	8 24	15
Calvers	1	47 14 53	1 50	19 35	15 33	8 33	2 32	6 29	19 27	3 27	9
	2	36 8 45	7 40	5 28	12 26	5 27	7 25	14 24	1 22	12 23	4
Per lb.											
VEAL CALVES	1	13½	21	18	14½	18½	18½	13½	13½	13	18½
	2	11½	18	15½	11½	11½	11½	11½	11½	11	11½
FAT SHEEP:		d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Downs	1	17	23	19½	18½	16½	16½	16½	14	18½	14½
	2	17	21½	17	15½	14½	14½	14½	12½	11½	12½
Longwools	1	17½	22½	18	16½	15½	15½	15½	13	12	13½
	2	17½	21½	15½	14½	13½	13½	12½	11½	10½	12
Crossbreds	1	17½	22½	19½	17½	16½	16½	16½	13½	13½	14½
	2	17½	21½	17½	15½	14½	14½	14½	11½	11½	12½
Per stone dead weight											
FAT PIGS:		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bacon Pigs	1	19 9 24	8 17	0 14	0 12	3 10	6 12	6 13	8 11	1 10	5
	2	19 9 23	8 15	5 12	7 11	0 9	4 11	5 12	7 10	1 9	5
Porkers	1	19 9 25	10 18	10 15	7 13	10 11	5 13	3 14	9 12	7 11	4
	2	19 9 24	2 17	4 14	3 12	8 10	4 12	2 13	8 11	6 10	3

¹ The prices of Herefords and Devons are based on a comparatively small number of quotations.

TABLE VIII.—Quantities and Declared Values of Imports of the principal Agricultural Commodities into Great Britain and Northern Ireland in 1927 and 1928, with the Average of the Imports into the United Kingdom for the Years 1911 to 1913.

Commodity	Quantities			Declared Values		
	Annual Average, 1911-13	1927*	1928†	Annual Average, 1911-13	1927*	1928†
<i>Grain and Meal.</i>	Tons	Tons	Tons	£	£	£
Wheat	5,225,307	5,521,791	5,178,919	43,068,074	68,059,784	57,829,972
Wheat-Meal and Flour . .	537,213	548,045	446,347	5,714,439	8,555,159	6,266,005
Barley	1,118,516	820,925	648,208	8,071,609	8,938,592	6,685,034
Oats	912,268	295,352	372,220	5,800,459	2,454,832	3,736,800
Oatmeal (Including Groats and Rolled Oats) . .	42,285	26,178	34,854	602,913	615,046	793,834
Peas	112,485	73,160	85,098	1,103,733	1,764,042	1,907,280
Beans (other than Haricots)	63,771	36,259	68,021‡	471,456	484,954	804,533
Maize	2,193,910	2,096,393	1,650,600	12,692,064	15,336,094	14,774,280
Maize-Meal and Flour . .	29,099	94,512	144,431	215,885	848,071	1,390,195
<i>Meat.</i>						
Beef, Fresh, Chilled and Frozen	409,504	670,831	613,349	13,626,484	20,486,988	31,042,486
Other Descriptions (including tinned and extracts)	84,418	52,391	53,361	2,337,543	5,070,015	5,324,266
Mutton and Lamb . . .	267,257	231,802	236,860	10,331,026	17,880,063	19,806,670
Pork (Including Bacon and Hams)	316,979	501,353	529,420	19,781,134	46,605,078	48,591,277
Unenumerated (including Rabbits)	75,492	26,467	27,441	3,030,963	1,347,684	1,477,333
Total Dead Meat . . .	1,103,650	1,532,649	1,510,431	49,107,150	100,889,853	106,242,032
Butter	207,448	290,931	306,041	24,346,157	43,204,721	52,118,194
Cheese	115,908	147,454	150,318	7,196,391	13,493,668	15,003,200
Milk, condensed	60,486	125,976	133,735	2,140,602	5,040,036	5,252,274
Eggs	Gt. Hnds. 19,907,633	Gt. Hnds. 24,340,350	Gt. Hnds. 26,487,410	8,650,894	15,914,257	17,766,531

* Revised figures.

† Subject to revision.

‡ Including Haricots.

Note.—The figures for 1927 and 1928 include the trade of Great Britain and Northern Ireland with the Irish Free State, and exclude the direct foreign trade of the Irish Free State.

The decline in receipts of *Flour* during the year under review was even more marked relatively than in the case of wheat, the total imports falling by over 100,000 tons (19 per cent.) to 446,000 tons, this amount being the smallest received for some years past. Exports from Australia were curtailed by nearly 50 per cent. to 49,000 tons, and those from the United States by 34 per cent. to 96,000 tons, while Canada's contribution, too, was rather less on the year. Values, at £6,266,000, showed the sharp fall of £2,289,000, or more than 25 per cent.

Barley was imported in considerably smaller quantities, the year's total amounting to 648,000 tons, or 173,000 tons (21 per cent.) less than in 1927, and was, in fact, little more than the

particularly low figure of 578,000 tons recorded in 1926. Reductions were general amongst most of the consigning countries, the United States quota falling by 10 per cent. to 240,000 tons, but were partially offset by an increase of 35,000 tons to 103,000 tons in arrivals from Canada. The drop in the declared values was proportionately a little greater (25 per cent.) than with the imports themselves, while the average tonnage value was about £10 5s., as against £11 in 1927, and £9 in 1926.

Last year's receipts of *Oats*, at 372,000 tons, were 77,000 tons (about 25 per cent.) greater than in the previous twelve months, but the increase was not quite sufficient to counter-balance the heavy drop of 86,500 tons which occurred between 1925 and 1926. Substantial rises took place in the exports from most countries, particularly the United States and Canada, Argentina and the Irish Free State exceptionally shipping rather less. The total declared value rose by over one and a quarter million pounds sterling and the average value per ton by about 25 per cent. to £10.

The increase in the consignments of *Maize* in 1927 was not maintained last year, receipts falling by nearly half a million tons (20 per cent.) to 1,651,000 tons. The reduction was accounted for chiefly by the fact that Argentina shipped only 1,234,000 tons, as compared with 1,782,000 tons in the preceding twelve months—a decrease of as much as 548,000 tons, or roughly 30 per cent. Roumania also exported less. Owing, however, to the higher prices realized for this grain, the total declared value showed a fall of only 3·6 per cent. to £14,774,000, the average tonnage value amounting to nearly £9 as against £7 5s. in 1927 and £7 10s. in 1926.

Meat.

Imports of meat last year totalled 1,510,000 tons, or 22,000 tons less than in the preceding twelve months, but a little more than in 1925 and 1926.

Arrivals of *Beef* at 613,000 tons were about 57,000 tons smaller. Chilled descriptions claimed a large share of the reduction, consignments from the Argentine falling off by 67,000 tons to 432,000 tons; a proportion of this was, however, offset by augmented exports from other countries. Considerably reduced quantities of frozen beef were also received from Argentina (38,000 tons against 78,000 tons in 1927) and in spite of increased arrivals from Australia and New Zealand, the total supply under this head from all sources declined by 18,000 tons, or 12 per cent. It is noteworthy that although the beef-exporting countries, taken as a whole, despatched diminished quantities of meat last year, the aggregate declared value rose by over one and a half million pounds sterling to £31,042,000.

Receipts of frozen *Mutton and Lamb* again showed little material change, the 287,000 tons recorded representing a rise of approximately 2·5 per cent. As in the previous year, nearly one-half of the total emanated from New Zealand and rather more than 25 per cent. from the Argentine. The declared value was close on £2,000,000 more at £19,807,000.

Shipments of *Bacon* were about 3 per cent. greater on the year, the total advancing from 424,000 tons to 442,000 tons. Denmark sent 268,000 tons, or roughly 60,000 tons more than in 1927, while the contribution from the Netherlands rose by 13,000 tons to 53,000 tons. As regards *Hams*, receipts rose from 44,000 tons to 48,000 tons, thus arresting the slight but persistent declines which have been noticeable for some years past. The embargo on continental *Fresh Pork* again had the effect of restricting supplies to those from the Irish Free State, 19,000 tons being consigned as against nearly 16,000 tons in 1927.

Although particulars of the imports of *Live Animals* for food are not given in the accompanying table, a brief survey of the year's movements may be of interest. Arrivals of cattle amounted to 725,000, or 88,000 (14 per cent.) more than in 1927. The Irish Free State exported a total of 724,000 representing an increase of 100,000 on the year, but the number received from Canada again showed a remarkable drop, a mere 405 being shipped as against 8,000 in 1927 and 79,000 in 1926. Imports of sheep and lambs from the Irish Free State totalled 592,000 as compared with 584,000 in the preceding twelve months, while 318,000 pigs were despatched—a decrease on the year of 76,000 or nearly 20 per cent.

Dairy Produce.

Shipments of *Butter*, at 306,000 tons were 15,000 tons (5 per cent.) greater than in 1927, Australian supplies increasing from 24,000 tons to 44,000 tons, while consignments from Denmark and New Zealand were little altered at 101,000 tons and 61,000 tons respectively. The total declared value rose rather more in proportion (by 8 per cent.) to £52,113,000.

Cheese was received in slightly larger quantities, last year's imports being 150,000 tons, or 3,000 tons (1·5 per cent.) greater than in the previous twelve months. New Zealand sent 3,000 tons less but exports from Canada and Australia, at 46,000 tons and 4,000 tons respectively, increased sufficiently to more than make good this loss.

Following on the rise recorded in 1927, arrivals of *Condensed Milk* were further augmented by 8,000 tons (6 per cent.) to a total of 134,000 tons; the sweetened variety accounted for the whole of the increase, the advance in separated milk being from 93,000 tons to 98,000 tons.

During the period under review 9 per cent. more *Eggs* were imported, increases being general except in the cases of Denmark and Poland, which consigned fewer. The total of 26,467,000 great hundreds compares with 24,340,000 great hundreds in 1927, the principal countries of origin and the numbers of eggs received (in great hundreds) being as follows:—Denmark (5,330,000), Irish Free State (5,177,000), Belgium (2,908,000), Holland (2,724,000), Poland (2,562,000), Russia (1,767,000), France (1,659,000), China (946,000), and Egypt (810,000). The declared value rose by £1,852,000 (12 per cent.).

Total Imports.

Although no precise valuation of the total imports of food and other agricultural produce into this country is practicable within the limits of a short article such as this, the following rough summaries of the Trade returns are included as giving a general indication of the cost of our Overseas supplies. Taking only the principal agricultural commodities into consideration, the total sum spent on imports last year amounted to approximately £305 million, of which £90 million was paid for grain and meal, £122 million for meat (including £16 million for live animals), and £93 million for dairy produce. Of the total expenditure, roughly 50 per cent. went to foreign countries, a little over 25 per cent. to British Overseas Dominions and about 9 per cent. to the Irish Free State, these proportions being almost identical with those of a year earlier. The remainder (actually 10 per cent. or £30½ million) represents the value of receipts from countries not separately distinguished in the Trade Returns.

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NOTES, COMMUNICATIONS AND REVIEWS.

MR. RICHARDSON CARR.

THE death of Mr. Richardson Carr at his house, Mill Lawn, Burley, Hampshire, on April 18, 1928, was greatly regretted by members of council and many others; in fact by all whose privilege it was to know him and to form any estimate of the good work he had done for the Society. Mr. Carr first became actively associated with the Royal Agricultural Society in 1905. He had been a member since 1889, but it was not until 1905, when he was elected for Hertfordshire to the new Council, that he began his service in prominent offices which was continuous until his death. A serious and protracted illness had enforced comparative slackening in his work in 1925 and 1926, but it was

hoped he had recovered his wonted strength and energy when suddenly an attack of influenza resulted in his death as stated.

The Society has had no more energetic member of council than Mr. Carr. He brought to the service of the Society the same industry, concentration of purpose and regard for detail that had marked his career on the Tring Park estate and farms, and the work he accomplished in the various offices he filled was of great benefit and was greatly appreciated. He was at one time or another a member of several committees, but his services will best be remembered in connection with the Special Committee formed in 1905 to thoroughly investigate the position of the Society, and to make suggestions for reforms suitable to the times and to its needs under the altered conditions that arose at that critical juncture. He was also a member of the Finance, Veterinary, Stock Prizes, Judges Selection, Showyard Works, Selection and General Purposes, and Dairy and Produce Committees. For many years he was Chairman of the Stock Prizes and Judges Selection Committees. The record of the offices he filled alone testifies to the devoted work Mr. Carr rendered to the Society, but only those who were in constant contact with him could estimate adequately the heartiness and efficiency with which these services were given and their value to the public good.

British and Overseas Meat Production.—The paper on Meat Production which Sir William Haldane read at the Farmers' Club on December 10, 1928, did much to clear the ground for a more exhaustive and accurate consideration of the general subject of animal husbandry in this country. It had been felt that the market had been gradually slipping away from British stockowners producing meat, and especially beef. The dairy industry has been threatened by importations of cheaper articles to take the place of whole milk and milk products, and mutton, bacon, etc., also are often depressed by consignments from abroad, but the Farmers' Club paper and discussion concentrated upon beef because the subject was forced into prominence on account of the suspicion that rested upon the immunity of South American supplies from foot-and-mouth disease contamination.

Sir William Haldane has devoted time and pains to the consideration of the problem, not only as concerned possible disease infection, but more particularly with a view to throwing light upon the position and prospects of meat production in Great Britain. After showing that the output of beef in England had fallen 12 per cent. in 1925, from the pre-War level, Sir William remarked that the 14,400,000 cwt. of beef imported in 1927 represented an increase over 1913 of 50 per cent. These figures, he said, show how completely imported beef now dom-

inates the English markets. The extent and nature of the domination he pursued further, and found that since 1924 two-thirds of the imports have been chilled and in 1927 the proportion of chilled rose to five-sevenths of the total imports. The chilling process improves the position of the meat in the markets against the fresh supplies from home sources, and, therefore, increases the severity of the competition. The future promises no relief, for, leaving out Brazil for the moment, the Argentine and Uruguay alone have an estimated cattle population of about 45 millions—or three or four times the number in Great Britain and Ireland, nearly three times the number in Australia and New Zealand, and fully two-thirds the number of cattle in the United States and Canada together. On the basis of these figures they could feed the whole of England from their surplus, after feeding their own 12 million people. Last year these countries exported to Great Britain 12 million cwt. of beef, a million cwt. more than the total beef and veal production of England, Scotland and Wales, besides sending about 2 million cwt. to the Continent of Europe. In considering their potentialities, their magnificent natural conditions for the feeding of cattle cheaply, their power of continuous supply throughout the year and their low labour costs, must be reckoned on. It is these broad facts, says Sir William, British producers are faced with to-day—a depressing prospect for British farmers.

There are, however, certain matters of importance to keep in mind which may have a bearing on the future. The most important of these is that South America is cursed with a disease which has afflicted so many countries in the world, aftosa, as they call it there—our foot-and-mouth disease. The presence of this disease has affected the whole marketing conditions of their meat products in a manner that has greatly affected the markets of other countries and their supplies. There are two great markets in the world which the enormous beef production of South America could have supplied, and which, one might consider, nature had intended that continent to feed, these being the United States and Great Britain, countries with huge beef-eating populations, and both, as now appears, with pressing beef requirements. But the prevalence of the disease has excluded South America from the one and rather nearer market, so concentrating its whole surplus production on the other—Great Britain.

Having indicated the cause of excessive competition suffered by British farmers, Sir William Haldane shifted his ground for the moment to the United States in order to examine the state of things there. The position in North America offers a somewhat brighter prospect for British stockowners. The United States need the Argentine surplus, or the greater part of it, badly, even after absorbing the whole of the Canadian supplies. But

the bitter experiences with foot-and-mouth disease on former occasions have determined the United States to refuse steadfastly to import live stock, or refrigerated meat from any country where foot-and-mouth disease prevails. They dare not face the risks of a disease more infectious and uncontrollable than any other known, and in adopting this principle they are in accord with the overseas portions of the British Empire. Sir William states that the Argentine has been pressing the United States for years to relax the prohibition on chilled and frozen meat, but Washington has been adamant. He seems to doubt whether the United States can continue indefinitely to resist the offer of supplies from South America, and cites a reduction of about 10 million head in their cattle since 1922, together with an increase in the human population of about 2 million a year in support of this estimate. Even the whole of the Canadian surplus cannot meet this shortage, and imports from New Zealand will not make up the deficiency. The rate of consumption in the United States has been reduced more than 10 per cent. below pre-War level, he states, and there may come a time when the urban population will overrule the national policy and insist on additional supplies from wherever they can be obtained. On balancing this matter of rural and urban interests, Sir William says: "We see here an exactly contrary position to that in our own country, where the interests of our industrial classes as consumers are put far before those of the farmers, our producers." He proceeds: "I need not point out what would be the effect on our cattle and beef markets, were the United States to admit South American supplies, and relieve the pressure of the present unnatural concentration of South America's great surplus product on our markets. The position would be completely changed for the benefit and encouragement of our farming interests as a whole."

Reference is made to the rivalry known as the "Meat War" and the effect in lowering prices, and this is followed by an expression of the belief that our hope "for better and fairer beef prices in our markets soon would seem to centre on North American demand, whether operating directly on South American supply, or indirectly in taking other supplies off our home markets." He even visualises the shipment of Irish cattle or beef to the United States, should the expected shortage of meat there come true.

For home producers Sir William holds that the promise of best results lies in proper and orderly marketing of their products. He admits the difficulties that stand in the way for home producers, and does not underestimate them, but he thinks there is room for better distribution of home supplies so that they would not be crowded into short seasons, as is so often the

case now, to the embarrassment of buyers and the loss of the farmers. He even hints at cold storage at convenient centres for home beef as a means of keeping excessive supplies off the market in the crowded autumn months. Something of the kind is already being organised in Scotland in the sale of milk, and he thinks that if a permanent solution is to be found it will be through unity in marketing.

REVIEWS OF BOOKS.

The number of books of interest to agriculturists published during the year is considerable, and as a rule a liberal proportion of them is worthy of prominent mention, and even recommendation. A few have been selected from the arrivals in the course of the past year for special prominence, but readers may find among the remainder—a list of which is given on page clxii *et seq.* of the Appendix—several that will appeal to them for some particular reason.

Permanent and Temporary Pastures (Simpkin Marshall Ltd., London) hardly needs introduction to members of the Royal Agricultural Society, or to prominent agriculturists. This work has been of standard importance ever since it made its first appearance in 1886, and eight editions of the late Mr. Martin John Sutton's book have been issued in response to the demand. It was felt that, although there was still a market for the original volume, the time had come for a thorough revision of its pages, and this Mr. Martin H. F. Sutton, with the assistance of Professor John Percival, has effected, and it takes the form of a ninth edition that maintains in every sense the excellence of the imposing book Mr. Martin John Sutton wrote forty-three years ago. The volume has been brought up to date in every sense, and students and farmers can study and consult its pages with confidence and benefit. Grassland is more prominent in British farming to-day than ever before, and the best way to mitigate the dislike of changing from arable to grass is to make the best use possible of the land in the production of grass in the first place, and of utilising the grass when it is grown. This handsome volume will be a helpful guide in both processes.

Economic Farm Buildings (The Library Press, Ltd., 83 Southwark Street, S.E.1) is a second edition of a book published in 1919 and which appears to have been accorded a generous reception. The author is Mr. Charles P. Lawrence, and in an Introductory Note Sir Thomas Middleton writes in appreciative terms of the merits of the book. There is something unusually fitting in the mention of this book along with Mr. Sutton's volume, for both are peculiarly important at the present juncture. Farm buildings have never been of greater significance than

now, for with animal husbandry gaining in prominence, and the imposition of increasingly exacting conditions regarding cowsheds, the construction of buildings has been forced into unwelcome prominence. The cost of materials and labour also have intensified the need for setting about building with proper understanding of the purposes to be served, and the saving of unnecessary expenditure. Mr. Lawrence's book, with 89 illustrations, may be consulted with advantage in matters relating to the equipment of farms with suitable and serviceable buildings.

Sugar-Beet (The Clarendon Press, Oxford), by Messrs. A. Bridges and R. N. Dixey, comprises an account of the sugar-beet industry in France, Belgium, Holland, and Germany. The authors have collected into convenient form a vast amount of information concerning the position and prospects of this industry on the Continent, and growers in this country may gain much by perusing the information placed at their disposal in so acceptable a form. It is true that several features are described and illustrated in the book that are not likely to be reproduced here, as, for instance, the amount of women labour employed on the Continent, but most points of importance are dealt with in a way that encourages the hope that important developments may follow here with longer experience and continued persistence. The chapter on the growing of seed is a case in point. The authors suggest that there are no insuperable difficulties in the way of growing at home much of the seed required in Great Britain.

The Fertilisers and Feeding Stuffs Act 1926 (Butterworth & Co. Ltd., Bell Yard, Temple Bar, London, E.C.4) is a very convenient handbook in which Mr. H. J. Johns explains the latest measures dealing with the sale and use of feeding stuffs and fertilisers. It is well that buyers and users of these basic raw materials should keep themselves informed concerning points bearing on the marketing and use of them, and, as Lord Bledisloe says in a commendatory Foreword, Mr. Johns is peculiarly competent to act as a guide. His book provides the information that will render his assistance timely and valuable.

Three smaller works may be grouped together, not because of lack of importance or value, but as a matter of convenience. All three come from Oxford and are the result of work undertaken by the Agricultural Economics Research Institute. **Grass Farming in the Welland Valley** (Clarendon Press, Oxford), by Mr. J. Llefelys Davies, is a particularly interesting pamphlet. It is a study of one of the most distinctive areas in English farming, and the author writes instructively of the methods in vogue in that remarkable district. **A Survey of Milk Marketing** (The Clarendon Press, Oxford) is one of the series written by

Mr. F. J. Prewett, and dealing, as it does, with Wiltshire and Somerset (and the City of Bristol), it is interesting and helpful on many points of significance to dairy farmers. The author has conducted his inquiries with understanding and evident desire to help in solving marketing difficulties. **Sugar-Beet: Costs and Returns** (Agricultural Economics Research Institute, Oxford) is a summary of valuable statistics prepared by Messrs. A. Bridges and J. R. Lee on the sugar-beet year 1926-27. The details of the 1926 crop were, of course, unequalled in the sunless season of 1927, but they can be taken as a safer guide than those for the latter year, and the information given here will be studied with advantage.

THE NOTTINGHAM SHOW, 1928.

NEVER before has the Royal Agricultural Society made a return visit to a locality after such a brief interval as thirteen years. But the country meeting at Nottingham in 1915, held under the abnormal conditions prevailing during the War, had of necessity to be restricted in certain directions, and could hardly be regarded as typical of the national agricultural gathering. A promise was therefore made to the Nottingham Corporation that the Society would pay a return visit when in their opinion the circumstances warranted it, and conditions in the post-war period were more favourable.

It is quite possible that the invitation would have been delayed for some years, but the sale by Lord Middleton of Wollaton Park, the site of the showyard in 1888 and in 1915, somewhat precipitated matters.

It was thought that Wollaton Park was the only possible site for a Royal Show at Nottingham, but when the Corporation purchased the Park they felt bound to at once develop it as a Housing Site, Public Golf Links and Recreation Grounds—which meant that it would not be available for the Show.

So keen, however, were the inhabitants of Nottingham and district to have the Show again in their midst that a public meeting was called to consider the situation, and as a result a public-spirited citizen offered to place some land which was ripe for building development, opposite to Wollaton Park on the Ilkeston Road, at the disposal of the Nottingham Corporation in order that they might offer it to the Society for the purposes of a showyard.

The invitation by the Corporation and the offer of the site were eventually accepted, and the thanks of the Society are due to Mr. John Bell, Mr. W. J. Board (Town Clerk of Nottingham), and others, for their good offices in the matter.

Consequent on the visit of the premier Society the Nottingham Agricultural Society agreed to withhold their show for the year; and, following the established custom, privileges of reduced entry-fees and free admission were extended to Members of the County Society.

Three Royal Shows have now been held at Nottingham, and some details of these are collected for comparison in the table below :—

Year	President	No. of Implement Stands	Entries of Live Stock	Number of Persons admitted	+ = Profit - = Loss
1888	Sir M. W. Ridley, Bt.	553	1,886	147,927	+ £4,229
1915	Duke of Portland, K.G.	339	2,297	103,883	- £2,945
1928	Lord Harlech . .	467	3,353	108,677	+ £722

The site of the showyard lay to the north of and about 3½ miles from the centre of the city. It was almost square in shape, but the fact that it was only 96 acres in extent, and that in its centre there was a lake with a spinney adjoining, made necessary some departure from the usual arrangement of the different sections of the showyard. The main entrance was in the Wollaton-Ikleston Road. The ground near the entrance was this year occupied by exhibits of machinery in motion, instead of the usual rows of ordinary implement shedding, and there were not the customary avenues leading direct to the centre of the ground. Every available space had to be utilised, and in the very warm weather the compactness of the Show made it less tiring for visitors to inspect the exhibits in the several departments.

Prizes offered for competition amounted to £14,633. Of this total, the Nottingham Local Committee contributed £1,454, and £3,238 were provided by the various Breed Societies.

Early in 1928 the Society accepted a sum of £500 from the Merchants of the Staple of England for the establishment of a fund to provide out of the yearly income therefrom annual prizes to be competed for by growers of wool. At the Nottingham Show two special cash prizes—known as the “Merchants of the Staple of England Prizes”—were for the first time awarded. These were for the best single fleeces taken respectively from (1) any short-woolled breed of sheep, and (2) any long-woolled breed of sheep.

A new regulation was included in the stock prize sheet for Nottingham whereby in the event of the average entries per class throughout the section of any breed falling below four and/or the number of different exhibitors throughout the section

being less than four, the classification for that breed was automatically cancelled for the year. Two breeds of cattle and six breeds of sheep had no representation in the showyard in consequence of this regulation.

There were no restrictions on the movement of stock to the Show, as at that time the whole country had been free of foot and mouth disease for some weeks. History, however, repeated itself, for shortly after the opening of the Show an outbreak was confirmed at Skipton Lane, near York, in consequence of which the Ministry of Agriculture ordered the removal from the yard and detention in isolation of four head of cattle and thirty-four pigs which had come from the infected area. All exhibits were found on inspection to be free of disease, and the Ministry adopted the same procedure as at the Newport Show of 1927 and the Reading Show of 1926, licensing exhibits of cattle, goats, sheep and pigs back to their destinations for 7 days' isolation. As in the two previous years, none was permitted to be sent on direct from the "Royal" for exhibition at any other Show.

In view of the restrictions imposed, it was decided to cancel the special County Classes for Cattle and Pigs, which had been included in the prize sheet, and which were to have been judged in the showyard on the Friday.

The Flower Show as usual was a most excellent and well patronised section of the Show. Owing to the favourable season, exhibits were shown in perfect condition. In spite of the fact that two large tents covering a larger area than usual had been erected, it was found impossible to place all the exhibits on the staging provided, and some of the avenue space and even that out of doors in the vicinity of the tents had to be utilised. The judging was completed punctually to the time allotted, and the general public were able to gain admission to view the display at the time stated in the programme.

The outstanding section of the Show was, without doubt, the collective exhibit of machinery and appliances connected with Dairying. This was organised by the Committee of the World's Dairy Congress, held in this country during the summer. Representative as it was of many countries, the exhibit was one of the finest of its kind ever brought together in one building, and attracted many visitors.

Another interesting "side show" was the Marketing Demonstration, staged in the building of the Ministry of Agriculture and Fisheries.

In accordance with the customary programme, the opening day, Tuesday, July 10, was devoted to the judging of live stock of all breeds. A descriptive Report on the exhibits, by the Editor, appears in the pages following, and a list of the awards in the different sections will be found in the Appendix.

STATEMENT OF ENTRIES FOR THE 1928 SHOW, COMPARED WITH PREVIOUS YEARS.

Entries of Live Stock, Poultry and Produce.

	Nottingham, 1928	Newport, 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Derby, 1921	Nottingham, 1915
Horses . . .	607 ¹	429 ¹	614 ¹	658 ¹	788 ¹	641 ¹	713 ¹	601 ¹	500 ¹
Cattle . . .	1,261 ¹	1,214 ¹	1,640 ¹	1,565 ¹	1,302 ¹	1,185 ¹	1,547 ¹	1,254 ¹	862 ¹
Goats . . .	61 ¹	40 ¹	67 ¹	56 ¹	60 ¹	68 ¹	61 ¹	68 ¹	—
Sheep . . .	591	524	724	711	633	728	715	788	575
Pigs . . .	833	664	986	932	1,212	1,048	1,164	902	360
Total . .	3,353	2,871	4,031	3,922	3,975	3,670	4,200	3,613	2,297
Poultry . .	1,036	887	1,111	970	1,157	1,189	1,205	1,219	1,286
Produce . .	365	350	356	612	300	436	247	322	461

¹ Exclusive of Double Entries.

Shedding in Implement Yard (in Feet).

Description of Shedding	Nottingham, 1928	Newport, 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Derby, 1921	Nottingham, 1915
Ordinary . .	Feet 3,035	Feet 2,875	Feet 3,360	Feet 3,985	Feet 4,145	Feet 4,280	Feet 4,450	Feet 4,595	Feet 4,885
Machinery . .	5,466	3,855	4,090	3,880	3,685	4,230	4,240	5,560	2,935
Special . . . (Seeds, Models, etc.)	3,501	2,756	3,420	3,575	3,867	3,892	3,501	3,835	2,884
Total . . . (Exclusive of open ground space)	12,002	9,486	10,870	10,940	11,697	11,902	12,191	13,990	10,704
No. of Stands .	467	369	446	438	455	453	494	508	339

Their Majesties The King and Queen, who were the guests of the Duke and Duchess of Portland, arrived at Welbeck Abbey on the Monday. On the following day H.M. The King performed the Opening Ceremony in connection with the new buildings of Nottingham University, and on the Wednesday Their Majesties honoured the Society by visiting the Show, arriving from Welbeck at noon. The Royal visitors were met at the main entrance by Lord Daresbury, the Honorary Director, and conducted through the machinery section to the Royal Pavilion, where they were formally received by Lord Harlech as President of the Society. Having visited the Flower Show, Their Majesties returned to the Pavilion and were the guests of the President at luncheon. During the afternoon The King and Queen drove to the Ring, where the Cattle were paraded for their inspection. Later, Their

**COMPARATIVE STATEMENT OF ENTRIES, &c.,
AT TWO SHOWS HELD AT NOTTINGHAM IN 1915 AND 1928.**

HORSES, CATTLE AND GOATS.	1915		1928		SHEEP, PIGS, POULTRY AND PRODUCE	1915		1928	
	Classes	Entries	Classes	Entries		Classes	Entries	Classes	Entries
HORSES :—					SHEEP :—				
Prizes		£2,253		£3,514	Prizes		£1,793		£1,974
Shires	11	110	11	69	Oxford Down	5	42	5	47
Clydesdales	9	53	5	30	Shropshire	6	54	6	61
Suffolks	8	24	11	73	Southdown	6	66	6	65
Percherons	—	—	10	77	Hampshire Down	6	33	5	41
Hunters—					Suffolk	6	30	6	70
Breeding Classes	12	109	12	102	Dorset Down	3	12	3	28
Riding Classes	4	56	7	147	Dorset Horn	4	10	3	—*
Polo and Riding					Wiltshire or Western				
Ponies—					Horn	—	—	3	15
Breeding Classes	5	27	4	31	Ryeland	5	24	5	31
Hack and Riding					Kerry Hill (Wales)	3	9	5	60
Ponies	8	19	3	50	Clun Forest	—	—	3	—*
Cleveland Bay or					Lincoln	7	69	6	57
Coach Horse	2	6	—	—	Leicester	4	18	4	30
Hackneys	7	32	—	—	Border Leicester	3	9	4	—*
Hackney Ponies	2	5	—	—	Wensleydale	4	16	5	28
Welsh Ponies	4	11	2	11	Lonk	2	5	—	—
Shetland Ponies	2	14	2	11	Derbyshire Gritstone	2	2	—	—
Children's Ponies	—	—	3	39	Kent or Romney				
Driving Classes	7	50	10	62	Marsh	6	68	6	46
Pit Ponies	2	7	2	20	Cotswold	4	15	—	—
Jumping	4	75	4	131	Devon	2	2	2	—*
Total for HORSES	82	598 ¹	86	853 ¹	South Devon	5	13	2	—*
					Dartmoor	3	10	—	—
CATTLE :—					Exmoor	3	9	—	—
Prizes		£2,530		£6,119	Cheviot	3	24	—	—
Shorthorn	13	200	11	180	Herdwick	3	11	—	—
Hereford	8	70	9	64	Welsh Mountain	2	11	2	12
Sussex	5	20	5	23	Black Welsh Moun-			2	—*
Welsh	4	12	6	28	tain	—	—	—	—
Longhorn	4	18	2	13	Black-faced Moun-	2	13	—	—
Aberdeen Angus	6	44	6	58	tain				
Belted Galloway	—	—	5	34	Total for SHEEP	99	575	83	591
Galloway	5	24	4	18					
Park Cattle	—	—	2	—*	PIGS :—				
Dairy Shorthorn	5	101	10	218	Prizes		£782		£1,652
Lincolnshire Red					Large White	8	111	8	196
Shorthorn	8	50	8	69	Middle White	6	40	8	163
Devon	6	27	5	—*	Tamworth	6	29	6	43
South Devon	4	25	5	26	Berkshire	6	63	8	122
Red Poll	6	34	7	74	Large Black	6	77	8	112
Blue Albion	—	—	6	44	Gloucestershire Old				
British Friesian	6	53	12	140	Spots	—	—	6	37
Ayrshire	3	15	4	28	Lincolnshire Curly-				
Guernsey	7	64	7	108	Coated	6	40	—	—
Jersey	8	99	7	101	Wessex Saddleback	—	—	6	70
Kerry	3	14	5	42	Essex	—	—	6	—*
Dexter	3	19	5	45	Long White Lop-			6	44
Milk Yield	12	120	11	137	Eared	—	—	—	—
Butter Test	2	74	2	82	Total for PIGS	38	360	62 ²	833
Total for CATTLE	118	1,083 ¹	144	1,480 ¹					
					POULTRY :—				
GOATS :—					Prizes		£475		£551
Prizes				£111	Entries	152	1,286	119	1,036
Inspection Classes	—	—	9	61					
Milk Yield	—	—	2	42	PRODUCE :—				
Total for GOATS	—	—	11	103 ¹	Prizes		£396		£ 98
					Butter	6	68	5	72
					Cheese	9	64	13	145
					Bacon and Hams	9	32	—	—
					Cider	8	85	3	75
					Bottled Fruits	5	17	—	—
					Wool	20	90	17	73
					Hives and Honey	30	105	—	—
					Total for PRODUCE	87	461	33	365

Grand Totals for LIVE STOCK, POULTRY, PRODUCE, &c. in 1928 } 543 Classes . 5,261 Entries . 214,683¹ Prizes

¹ Animals exhibited in more than one class are here counted as separate entries. ² Including 2414 for Flower Show. * Classes cancelled under regulation of Prize Sheet.

Majesties made a tour of the exhibit of Dairy Machinery, etc., mentioned above, under the guidance of Lord Desborough (President of the Congress). Various other stands were visited, after which Their Majesties proceeded to the Royal Box in the Grand Stand and witnessed horse-jumping in the Large Ring.

After leaving the showground shortly before 4 p.m. Their Majesties called *en route* at Lenton, the farm recently taken over by H.R.H. The Prince of Wales.

Among the visitors on the Tuesday and Wednesday were the Empire Farmers, who made a tour of the country during the summer under the auspices of the British National Union.

On Thursday the Show was honoured by the presence of another Royal visitor in the person of H.R.H. The Prince of Wales. His Royal Highness was the guest of the President at luncheon. He visited the stand of the British Legion and several other exhibits, saw the Cattle Parade, and witnessed the judging of Riding Hunters and also some of the Jumping.

During the afternoon the verandah of the Members' Pavilion collapsed under the weight of the crowd of people who rushed there to catch a glimpse of the Prince. Some alarm was created by the incident at the moment, but, happily, no one sustained any serious injury.

At the General Meeting of Governors and Members, which took place in the Large Tent on Thursday, the President read the following letter he had received from His Majesty's Equerry :

WELBECK ABBEY,
WORKSOP,
NOTTS.
11th July, 1928.

DEAR LORD HARLECH,—

I am commanded to congratulate you, the Honorary Director Lord Daresbury, and all concerned on the high standard of excellence both in exhibits and as regards the general arrangements of the Showyard, which Their Majesties had much pleasure in visiting to-day. The King and Queen greatly appreciated the loyal and friendly welcome accorded to them by the many thousands present in the grounds.

The King and Queen were much impressed with the wonderful collection of implements and mechanical appliances in the World's Dairy Congress Section as evidence of what science and engineering can do for this industry.

It is the King's earnest hope that the fine weather may continue, and that you may be able to record during your Presidency a highly successful Show.

Yours very truly,
(Signed) CLIVE WIGRAM.

In the course of a speech proposing a vote of thanks to the Corporation of Nottingham, Colonel Stanyforth took the opportunity to congratulate Alderman Huntsman on being Nottingham's first Lord Mayor. He also congratulated the City on the honour which had been conferred by The King that week.

On the Saturday the Show was visited by some 3,000 children in organised parties from the Schools of Nottingham and Nottinghamshire.

The Nottingham Show of 1928 will be memorable for its exceptionally favourable weather. There was sunshine every

day, and not a drop of rain fell during the whole period of the Show.

Admissions by payment at Nottingham, 1928.

Day of Show	11 a.m.	1 p.m.	3 p.m.	5 p.m.	Day's total
Tuesday (10s.) . .	948	1,893	2,250	2,381	2,388
Wednesday (5s.) . .	4,327	11,687	16,803	18,055	18,244
Thursday (3s.) . .	9,977	26,929	38,200	43,381	44,293
Friday (3s.) . .	4,938	9,599	12,710	14,336	14,775
Saturday (1s.) . .	7,624	13,803	22,416	28,066	28,977
Total for Show .					108,677

Total Admissions at Nottingham, 1928, compared with previous six Shows and Nottingham, 1915.

Day of Show	Nottingham, 1928	Newport, 1927	Reading, 1926	Chester, 1925	Leicester, 1924	Newcastle, 1923	Cambridge, 1922	Nottingham, 1915
First . . .	2,388	1,214	3,568	3,852	2,273	3,587	3,338	1,641
Second . . .	18,244	7,515	13,777	27,215	16,204	37,926	21,880	12,321
Third . . .	44,293	19,456	19,869	43,981	35,347	63,183	31,903	30,798
Fourth . . .	14,775	10,528	11,902	20,682	14,845	42,457	21,408	26,034
Fifth . . .	28,977	23,654	24,744	17,650	16,862	39,357	13,823	33,089
	108,677	62,367	73,860	112,880	85,531	186,510	92,352	103,883

The aggregate number of paying visitors was 108,677, of whom 44,293 were present on the Thursday. Details regarding the admissions are given in the various Tables, and comparative figures are included for the previous six Shows and the Nottingham Show of 1915.

T. B. TURNER.

16 Bedford Square,
London, W.C.

LIVE STOCK AT THE NOTTINGHAM SHOW.

EXPECTATIONS of strong classes of live stock at the Nottingham Meeting were not disappointed. The entries were satisfactory in all departments, but well-filled classes at so central a site as Nottingham were looked for and the results justified and fulfilled the prediction. The real strength of the Show of 1928, however, did not lie in numbers of animals exhibited; the general quality was even more impressive. The careful student of stockbreeding

must have been greatly gratified by the character of the animals shown in all the four chief sections. Whether the exhibits were judged individually, in breed representations, or in section groups, the results were equally pleasing and reassuring. It would be unwise and incorrect to suggest that the standard of quality did not vary considerably with breed and class, but in a collective sense the show of farm animals at Nottingham in 1928 was exceedingly encouraging. It demonstrated the sustained excellence of our pedigree live stock, the undiminished competence of our stockmen in preparing and showing the animals, and, it may be hoped, foreshadowed unabated confidence in the future of animal husbandry in its finest forms in this country. The exhibition, in short, was comprehensive, representative and meritorious.

HEAVY HORSES.

Breeders of heavy horses were emphatic in praise of the merits of the respective breed contingents. They were not all so well pleased with the numbers paraded. The Shire breed, for instance, was good so far as quality was concerned, but it was rather disappointing for its supporters to find that it was surpassed in numbers by two of the rival varieties. Yet it was the supporters that were to blame and not the breed. The class of Shire exhibited combined the best features of the breed in pleasing balance and it only wanted more of them to ensure for the Shire the premier position which it used to occupy without question. There were more entries than at Newport in the previous year, but with so many studs within easy reach of Nottingham a larger display than 69 was to be expected. The exhibits exemplified the types that are now winning favour with owners and buyers. The modern preferences for finer bone, freer action and silky hair were represented unmistakably in the animals shown, and especially in those selected for the honours. The premier cart horse retains his place in the country, but his pre-eminence is being challenged in the showyard.

The Clydesdale does not alter perceptibly. The quality exhibited at Nottingham marked the same characteristics as have won for the Scottish breed its position at home and abroad. For some time there has been a demand for, and a promise of, greater weight of bone and body, but it is hard to get away from the flat bone, the long pastern joints, and the stylish action that have so long been especially associated with this breed. Reluctance to forgo any of the points indicated can well be understood; indeed is to be appreciated. But it should not be impossible to add just that little bit of supplementary weight that would improve the appearance and, it is thought, the utility value of a very fine breed.

The Suffolk Punch had this time to take second place in point of numbers, although there were a baker's dozen more entered than at Newport. The East Anglian cart horse has supporters in every part of the country and, having ceased to be a territorial breed, anything may happen concerning it at the Royal Show. The classes were well filled and keen competition was the common experience in them. It would be difficult to say that there has been an increase in weight in the average specimen, but the more favoured animals seemed to have attained greater size and power than were usual some years ago. In any case there has been no loss of quality of limb or action and the Punch remains a very acceptable type of draught horse for farm or town.

It was not altogether agreeable to supporters of the British breeds to find that the Percheron surpassed them in numbers at their own premier show. The 36 entries of 1927 increased to 77 in 1928, and although the classes were not marked by consistency of type and general characteristics, it will not be disputed that the French breed did itself credit and that its supporters were alive to the advantages of the unequalled publicity that the Royal Show affords. The Percheron is not in so many hands as the other breeds, and the Nottingham entries flatter its relative position in the country, yet it would be unfair to seek to withhold the recognition that is due to the enterprise that resulted in such pleasing classes at the premier summer show.

HUNTERS, HACKS AND PONIES.

The strongest feature of the section for "Light-legged" horses was the attractive collection of hunters. The riding classes were well maintained and again formed an extremely welcome feature in the general show of farm animals, but more gratifying even than the classes shown in the saddle was the increased display of breeding stock. At a centre like Nottingham, so near to the headquarters of hunting, imposing classes of made hunters were to be expected. It was not so certain that the breeding types and ages would muster in corresponding force. As a matter of fact the mares and young stock comprising the "breeding classes" came out in numbers, and were of merit and promise that justified confidence in the future of the saddle horse both for breeders and users. The deduction seems reasonable that the breeding of hunters has received fresh stimulus in the Midlands. The entries came from a wide area, actually from Hampshire and Sussex to the South and Midlands of Scotland, so that the locality of the show would appear to have only an indirect influence upon the muster of young animals, but Nottingham is so indissolubly identified with hunting that breeders

may have been induced to present their young stock before the visitors to the great summer meeting of the year. The quality of the stock was a noteworthy feature, but equally gratifying was the number of studs, widely distributed over the country, from which the exhibits were contributed. It would almost seem as if the spirited character of the market for high-class hunters was inducing farmers to devote greater attention to the catering for the requirements of the market. Good markets are so rare, and paying prices so uncommon, that the ready outlet for hunters or saddle horses may well be utilised to supplement the revenue from the ordinary markets for farm animals.

The merit exhibited in the riding classes testified to the quality of the horses bred and trained for the saddle in Great Britain. Irish-bred animals were included in some of the classes, but the majority were bred in England and many by their owners. The classes throughout supported the idea that more attention is being given to the breeding of hunters and that the efforts of home breeders are meeting with a generous measure of success. The Irish standard may be hard to equal, but the quality of English-bred animals is gradually approaching the level that attracts and gratifies the followers of hounds.

Ponies hold their own in the premier show, but neither the number nor the merit vary very much. The position is not stationary as the different types are shown in fluctuating strength, but the whole continues to form an interesting section of an exhibition that would not be complete without them, and from which they would be greatly missed. Our ponies have a fascination for many, and the attention they arouse greatly exceeds their relative prominence in the great show. The driving and jumping classes also constitute features that appeal irresistibly to the public, and both classes made impressive displays at Nottingham.

CATTLE.

The proportions of the general Show vary from time to time, never very rapidly or sharply, but by easy stages that can be taken to denote changes in the relative prominence of the different kinds of stock. It would be imprudent to accept show statistics as reflecting accurately the national value of the several classes of animals and their importance to the industry, but a Show like that of the Royal Agricultural Society is a fairly safe indication of the manner in which breeders of pedigree stock allocate their attention to any or all of the four comprehensive groups of animals as well as breeds. The fact that one class of animal, or one breed, may be less numerously represented in the showyard does not mean that that breed or class has ceased to maintain its ground in industrial favour. Instances could be cited to disprove

any deduction of the kind. But fluctuations in the proportionate collections of horses, cattle, sheep or pigs cannot be looked upon as meaningless, any more than rises and falls in breed representations are without significance. Such variations should be studied with impartiality and interpreted with caution and discernment, but it would be unwise to disregard them, either for the general public or, more particularly, for the supporters of the classes or breeds concerned.

The cattle section of the Nottingham Show bore no trace of any general change in the position of the predominant class of farm live stock. Cattle breeders, and especially cattle graziers, have not been too liberally rewarded in recent years; indeed the trend of business has been definitely against them. But it would be impossible to conceive British farming without our breeds of cattle as a prominent and basic feature. They are indispensable to the mixed or specialised farming that will ever be the systems most suitable to this country. Circumstances may bring about modifications tending to weaken the position of certain types of cattle, but balanced production of animal products will suffer, and the security of the nation will be impaired in the result.

The collection of cattle at the 1928 Show was more remarkable for its merit than for its proportions. There was nothing in the imposing muster of animals paraded at Nottingham to suggest diminishing interest in this class of stock, and, still more, to indicate decreasing enthusiasm in the breeding and showing of pedigree animals. The classes were mostly well supported and merit of a high order was maintained. Yet defects were discernible in the representation of the breeds. The action of the Society in prescribing conditions under which classes will be provided and prizes offered—a step rendered necessary and fully warranted by considerations of economy and equity—led to several notable blanks in this and the sheep department. The most conspicuous gap was caused by the absence of Devon cattle. This old, strongly supported and valuable breed, effaced itself from the premier show of the year by its failure to comply with the stipulation of a modest minimum of entries. The result was deplored by all stockowners, for no Show can be accounted as representative that includes no Devons—the cattle of Quarty and others of enduring repute in cattle breeding—in its composition. The Show loses in interest on account of such weaknesses, but the chief loss falls undoubtedly upon the owners of a breed who miss the opportunity to exhibit the qualities of their animals to the international collection of stockowners that assembles in the Royal Showyard. A recurrence of similar misfortunes can be averted by organised action by breed societies and breeders.

The Shorthorn classes have not been surpassed and seldom equalled in recent years. The entries were of normal aggregate and the exhibits all over maintained a level that was not only complimentary to the skill and enterprise of the owners, but which dispelled completely any idea of deterioration in the herds of this great breed. The animals that had been prominent at the earlier shows of the season were again forward and were reinforced by exhibits more or less new to prominent showyards but worthy of the places they filled. Southern herds acquitted themselves with distinction in many classes, but it was noted with a certain measure of uneasiness that exhibits from the North attained disproportionate prominence. There was no suggestion of anything in this beyond the disquieting influences of recurring difficulties and disappointments in consequence of foot-and-mouth disease restrictions. English breeders have been disproportionately handicapped by impediments to business at home and abroad, and unless improvement can be effected in this respect the position of the premier breed South of the Tweed will be precarious, with a tendency to weaken. The exhibits from all parts blended with unmistakable consistency. The Shorthorn was seen in accordance with modern conceptions of what the dual-purpose animal should be. There is no longer that concentration upon meat that threatened to undermine the stability of the breed. Milk and general utility are not forgotten by breeders and judges in any part of the country, and the Nottingham collection of cattle testified to the prudence with which the balanced animal is cultivated.

It may be convenient to link the Dairy Shorthorn with her relative in the unqualified classes. It is significant of the steady development towards the dairy pursuit that the milking strains become increasingly important in the Show. In this sense the showyard is truly representative of what is going on in the country. The Dairy Shorthorns formed a very imposing feature at Nottingham. The centre was accessible to the many noted herds in the Midlands and the North, and the representation of the breed was gratifying and instructive. Again there was evidence in the classes and the judging, of firm belief in the maintenance of robust constitution and prudent regard for the frame and fleshing properties of the animal. The Dairy Shorthorn is a greatly improved animal compared with some years ago, and it is noticeable that the old families, the Duchesses and others of former distinction, are coming again conspicuously to the fore. The value of established pedigree is being proved and demonstrated in the readiness with which strains of Bates origin, suitably blended with Cruickshank and others of later evolution, respond to the wishes of modern breeders of skill. The present-day type of Dairy Shorthorn, so fitly typified at Nottingham, is

admirably adapted for the fulfilment of her purpose in the economy of the farm.

The Hereford breed was not present in large numbers, but the contingent was adequate to convey a fair idea of the merit of the famous cattle of the West Midlands. The entries were smaller than at Newport, but as the site was less accessible, there was nothing remarkable in this. The reduction was made in the right way, only the best exhibits being paraded. The display of Herefords was notably impressive and while numbers and quality can be combined with such good effect the benefit resulting to breeders must be satisfactory. The breed has a large following from overseas and it was gratifying to see that many of the leading herds were so strongly represented and the breed exhibited in a manner calculated to impress the mind and invite fresh support.

The Sussex classes are always more impressive in merit than in numbers, and the contingent that made the journey to Nottingham was particularly choice. The level classes benefited by the absence of the Devon, for the similarity in general outline and colour sometimes leads to confusion on the part of the uninitiated. This time, the weighty, smooth Sussex had unchallenged access to favour with those—and they are many—who have a preference for animals of this attractive type. The Sussex has more admirers than owners. One often hears expressions of surprise that the breed has not spread more widely throughout the country, or even does not occupy more solidly the pastures of its own county. It is not usually a liberal milker, and this fact may explain much in these times of extensive and increasing dairy farming.

The Black Cattle of Wales continue to improve and to win increasing favour. Progress towards uniformity in type and a general standard of merit has been a prominent feature of the classes of recent years and was again noticeable last July. The Welsh breed is commonly looked upon as a beef animal, but now that its milking qualities have become better known, and have gained for it considerable support in England and Scotland, visitors to the Royal Show discern definite traces of milking capacity in the breed. The showyard is not always the best place to see changes of this kind, but the stage of development is past when there is excessive concentration upon meat production in the show representatives of the breed.

The survival of the Longhorn is one of the interesting features of modern times. It is fitting that there should be this link with the work of Bakewell, and as long as the supporters of this old breed are enterprising in facilitating its presence in the Royal Show, it will be a welcome and an appropriate attraction.

The classes of Aberdeen-Angus attracted entries from a wide

area and the result was a pleasing exhibition of true breed character. This breed has won great distinction for its meat-producing qualities and it is on its fitness for this purpose that it is judged. There are liberal milking strains of the breed, as there are of most others, but it appeals chiefly to the grazier and the butcher. The classes at Nottingham were worthy of the noted herds represented, and some of the exhibits were particularly admired for the formation of frame and levelness of flesh. There may be a tendency to smaller scale and shorter leg, but the general characteristics remain clearly exemplified in the show-yard.

The Galloway breeds afforded a curious example of the qualified classes surpassing the general in numbers. There were nearly twice as many of the Belted strains as of the ordinary Galloway. The former, however, were not equal to the latter in average quality, there being a suspicion of animals being sent to make up the numbers. The hardy, rough-coated cattle of the Borders have strong and enthusiastic owners and supporters, and it can be claimed for the unqualified Galloway that it has achieved great distinction as a meat producer, chiefly, it may be remarked, through the skill of a Southern breeder and exhibitor.

The Red Shorthorns of Lincolnshire took advantage of the convenient opportunity to assemble in force. The numbers and quality were both satisfactory. Many farmers have a decided admiration for this class of cattle, an admiration based primarily upon, and supported by, the proved utility properties of the animals. In the early years of its separate existence this breed showed the variations in type common in such cases, but it is gradually surmounting these disabilities and there is now a definite stamp of Lincoln Red seen in increasing numbers every successive year. The Nottingham collection was not free from differences in size, outline and other features, but the breed is marked by its generous proportions and unmistakable utility qualities.

The South Devon came out in moderate numbers as if to accentuate the absence of its nearest neighbour, the Devon. This, the largest of our breeds, is known to be a creditable performer in both meat and milk production, and it constitutes one of the more distinctive varieties in the Show. The collection did justice to the herds of South Hams in the Southern Peninsula.

The Red Poll is one of the more progressive breeds and the range of country from which the exhibits came entitles it to be regarded as a national breed. East Anglia continues to be strongly represented, but, according to the catalogue, no one county now has any claim to precedence as the home of the hornless reds. It may be assumed from this that the position of the Red Poll improves steadily and her reputation as both milker

and meat producer has spread far over the country and abroad. There were many fine specimens of the breed at the Show of 1928, and the collection as a whole must have extended a favourable impression regarding the merits of the cattle.

The Blue Albion continues to give a good account of itself at the principal shows. The classes, however, still disclose variations that suggest recent independence, whereas the Derbyshire breed is a very old one. Probably the original stock are not so numerous as some could wish, and the inconsistency of the features may reflect endeavours to hasten the multiplication of the strains. The Blue Albion in its purest form, and as known in its older days, has claims to respectful attention, as had many of the exhibits at Nottingham.

As usual, the British Friesians formed one of the largest and most interesting collections in the department. The judging proceedings in the Friesian ring always attracts numerous on-lookers, and the deliberations of the judge are followed with keen and critical attention. In numbers the entries of this breed were second only to the Dairy Shorthorn, and it is safe to describe the classes as worthy of the position of the breed in every sense. The cows and heifers indicated liberal milking capacity, and appearances were not belied in actual performance.

The Ayrshire made a good impression so far as the numbers went, but an entry of 28 was hardly in keeping with the reputation of the breed, and with the efforts of its supporters to win for it wider attention South of the Tweed. The merit displayed was satisfactory, and the model udder of the true Ayrshire elicited unstinted admiration.

The Channel Islands breeds were both forward in great strength alike in numbers and quality. The Guernsey is enjoying a period of marked prosperity and the strong classes paraded at Nottingham reflected in worthy fashion the high favour in which the breed stands, wholly on utility merits. Owners of the larger-framed of the two remarkable breeds of dairy cattle emanating from the Channel Islands, had every reason to be gratified by the excellence of the merit displayed in all the classes. The Guernsey, like her neighbour and rival the Jersey, is noted as a butter producer, but the great popularity to which both have attained suggest that there are other qualities combined with butter of the finest grade and in large quantity, standing to her credit. The Jersey was on about the same level in numbers, and certainly not behind in quality. Admirers of the handsome Jersey are plentiful, and they were amply rewarded by the imposing classes they saw at Nottingham.

The two Irish breeds maintain their ground if they do not progress to any notable extent. The Kerry varies more than the Dexter in showyard favour, but here they were represented by

almost equal numbers. The quality in both was satisfactory, and it must be concluded that both serve a purpose that pleases their owners and warrants their adherence to them.

SHEEP.

The entry of sheep at Nottingham was appreciably larger than at Newport, notwithstanding the exclusion of several important breeds because of insufficient support. The fourteen breeds that made up the 591 entries could have been doubled, and the resources of the country in varieties would then not have been completely represented, but for some reason or other British flockmasters have never been strong supporters of the showing system. The importance of sheep to the industry and the nation has never been adequately, or fully, indicated in the showyard, even the Royal Agricultural Show failing to bring into contact with visitors from home and abroad specimens of all our thirty odd breeds, or in numbers even remotely suggestive of the industrial value of the pastoral pursuit.

The operation of reasonable economic laws has affected the sheep department more seriously than those of cattle and pigs. Many breeds of sheep are maintained in inaccessible areas, or are managed under circumstances that do not conduce to convenient training for the showyard. The selection of animals to prepare is often an exacting and difficult matter in flocks managed on the extensive system, and altogether the proceedings in respect to sheep for the showyard differ more definitely from the normal routine than may be necessary in other stock. In any case, it is a fact that, arresting as they sometimes are, the classes of sheep at the leading shows rarely do full justice to the prominent position this class of stock occupies in the economy of British farming.

The Nottingham collection, it will be understood, was more select than representative. So far as it went the show of sheep was exceedingly creditable; it lies with the supporters of the missing breeds to organise for wider and fuller representation in the future.

The Down breeds as usual constituted the outstanding feature of the section. It is gratifying to have this evidence of continued stability in the positions of the varieties most closely identified with the intensive system of shepherding. Arable sheep farming is a distinguishing characteristic of English farming. Its prosperity has been threatened by modern changes in labour and price values, and there are in some parts disquieting indications of its abandonment in favour of methods less exacting in labour. But it has not gone, and is not going, in all districts, and the excellent classes of the hurdling breeds that were penned at Nottingham were distinctly reassuring for those who are in a position to appraise them at their correct worth.

The weighty Oxford Downs did not represent so many flocks as could be wished, but since exhibiting is becoming more and more the work of the skilled artist and judge, supporters of the breed had reason to be satisfied with the state of things. The fine type of modern Oxford Down was presented in impressive consistency. It was pleasing to find the Shropshire forward in something like its former strength. There was a time when the judging of the Shropshire classes occupied the judges far into the evening, when, indeed there would be as many exhibits in the shearling ram class as there are now in the six classes, but things have altered rather than the breed, or its position in its own wide domain. It remains solid and serviceable in its territory, and for crossing purposes rams of the breed still go far and wide, while the position abroad is fully maintained and expands. The Southdown has probably never been stronger in favour than now. The 65 entries came from flocks widely enough apart to prove the adaptability of the oldest short-woolled breed to varying physical and climatic conditions. The modern Southdown is as finely modelled as the race ever was in its long history. It is built on correct lines for economic production, and it would be hard to imagine anything neater in animal form than the principal exhibits at the Royal Show of 1928. The Hampshire Down did not appear in great numerical strength, and in this respect the breed hardly did itself justice. In point of quality, however, there was no fault to find with the contingent. This early-maturing breed is moving gradually towards the smaller and neater sheep that is said to be wanted now, but owners are wisely taking no great risks in re-moulding a very fine type of commercial and impressive animal. The Suffolk continues its progressive career and contributed the largest contingent in the section. Flocks of this breed have spread far from its native county, and the exhibits came from many districts, although East Anglia still predominates in the catalogue. The value of pure breeds for crossing is of increasing importance, and the Suffolk is proving both impressive and popular for this purpose. It stamps its characteristics so clearly on its blended offspring that the use of Suffolk rams can readily be detected in the markets.

The Dorset Down was present in creditable strength, but its horned neighbour was missing. This was another instance of youth showing the greater vigour, for the Down is of tender age compared with the white-faced breed. The former does not appeal to all in form and type, but there can be no doubt about its utility properties, and these were suitably represented in the Nottingham classes. The Wiltshire or Western Horn justified the place provided for it. Here we have one of the revivals of breeds of another age, and one worthy of restoration from obscurity. The value of the rams for crossing is a prominent feature in sup-

port of the old Wiltshire sheep, now completely alienated from that county, but proving serviceable chiefly in North Wales and Northamptonshire. The Ryeland sheep have consolidated their position and have numerous owners and admirers. There was a good entry at Nottingham of 31, and visitors were privileged to see the old breed in its best modern form. Another breed that continues to advance in favour and reveals the vigour of youth in the showyard is the Kerry Hill (Wales). The classes were well filled and it may safely be said that nothing was left undone by its supporters to make it appear to full advantage, as it certainly did. Again the question arises as to whether the breed, removed so far, and in such large numbers, from its original home, may not lose some of its hardy hill characteristics. Anyway, the Kerry Hill has won wide support and holds its ground.

The longwool section was not so strong as the value of the breeds would warrant. There were only four of the historic types present, namely the Lincoln, the Leicester, the Wensleydale and the Kent or Romney Marsh. The Lincolns, with an entry of 57, made an impressive display. The classes might not have been counted strong twenty-five years ago, but the central and accessible showyard induced generous support from many of the leading flocks of the day. The result was exceedingly pleasing to admirers of the great wool-bearing breed of the premier farming county. The Leicester, having moved its headquarters to the East Riding of Yorkshire, came in force from that district. The flocks represented were not so numerous as could be wished, but Bakewell's breed did itself full justice in respect to merit. There has not been a finer show in recent years than was presented at Nottingham. The Wensleydale, tracing back to the Dishley stock, also attracted considerable attention. The distinctive fleece of this hardy longwool wins it instant favour, and the specimens exhibited at Nottingham reflected skill and understanding in breeding and management. The Kent or Romney Marsh exhibits from their native county were reinforced by entries from Lincolnshire, an interesting variation from the normal. Another notable feature was the successful opposition which was offered to a flock long supreme in the breed. The wider distribution of the honours must be regarded as a sign of strength, and will make for the extended success of the breed, which was shown in high merit last July. A small display of Welsh Mountain completed the sheep department on a standard worthy of this famous mutton variety. The quality was choice if the numbers were few.

FIGS.

The entries in the sheep and pig sections suggested the risk of error in taking showyard records as reflecting the relative pros-

perity of different classes of stock in actual economic experience. Whereas the sheep classes tend to decrease in number and in the support received, the pig department goes on steadily increasing in prominence and popular favour. Yet it will be generally agreed that sheep were decisively the most successful live stock of the farm group in 1928. The pig industry did not have a good year. Prices were often low and the cost of feeding-stuffs was out of all proportion to the selling value of the commercial animals. In the showyard, however, there was no trace of diminishing enthusiasm, or of the troubles that have been vexing owners of the ordinary commercial stock.

As at Newport in the previous year, nine of the dozen or more breeds were represented, and the total entry was 833, compared with 664. The increase was chiefly in the Large White, Middle White and Berkshire breeds. The pig is known to be a valued animal in the Midland counties, but the district herds were freely supported from distant areas, and altogether the Nottingham collection was exceedingly pleasing to those who favour this thoroughly useful class of farm animal. We may not have mastered all the points connected with the development of the pig industry, but we certainly possess the pigs, for nothing better in porcine form can be seen anywhere than was penned in the Royal Showyard of 1928. The show pig is often criticised, and while some strains may merit the criticism that is centred upon them, it would be unwise to group all alike and to withhold from the really worthy families—they are neither few nor inconspicuous—the generous recognition of value and influence that is their due.

The imposing collection of Large White pigs did not suggest neglect of the bacon type of animal. Our efforts in bacon production are often criticised, and are not always successful, but since the Large White is held to be the most prominent bacon pig known at home or abroad, it would seem that the production of the requisite animals for a flourishing bacon industry is maintained on a high level of merit. An entry of 196 of the great Yorkshire breed was exceedingly gratifying to its supporters and testifies to the continued prosperity of the breed. It might be imprudent to associate this impressive display too closely with the bacon-curing business; the Large White is used extensively for crossing with other breeds for the production of the pork types, sizes and ages, and it would probably be wiser to attribute the strong classes to the general utility of the breed.

The Middle White was not far behind in numbers and, perhaps, not at all in excellence. This variety usually makes an instructive and imposing appearance at the shows, and the Nottingham representation was remarkable for the uniformity of the exhibits as well as for the high general level of merit. The

Middle White is suggestive of pork rather than of bacon, but, suitably blended, the breed has a good record in both markets, and has a large following in the country.

Supporters of the Tamworth must have been gratified by the display this thrifty breed made at Nottingham. In these days of rapid production and early maturity, it was to be expected that things would have gone hard with a slow-maturing breed like the Tamworth, but recent evidence points quite definitely in the other direction. The fine old red or sandy pig of the Midlands is finding increasing support and more than holding its own in the keen rivalry of the time.

The popularity of the Berkshire tends to spread into the North. The entries at Nottingham totalled 122 against 72 at Newport, and there was evidence in the well-filled classes of unabated support and at least maintenance of established merit in this favourite variety. The Berkshire, although built on pork lines, is competent to do good service in the bacon business and when crossed with intelligence has given excellent results in either market. It is pleasing to see that this popular breed continues to make so good a show at the premier fixture of the year.

The Large Black is widely distributed and greatly valued for its utility properties. It is a homely, thrifty pig, and crosses to advantage with most breeds or grades. Several South-Western herds were strongly and successfully represented, but Nottingham is far from some of the strongholds of the breed, and that may have accounted for the small falling off in the entries compared with 1927. The merits and distinguishing characteristics of the breed, however, were exhibited in unmistakable form.

The Gloucestershire Old Spots were not penned in quite the Newport numbers, but, again, visitors had every opportunity for gaining a sound idea of the qualities of the breed. The spotted pigs of the West have found congenial homes throughout the country, and have proved themselves serviceable animals on the farm.

The Wessex Saddle-back, on the other hand, increased in number compared with 1927, and also gave a very good account of itself in quality. Old in history but young in registration, this breed has won and holds support on its merits. The Essex breed, similarly marked but owning a distinct existence as a breed, was also well represented and, naturally, the classes were better filled than at Newport. The Long White Lop-eared pigs of Devon and Cornwall have spread into many other counties, and the fact that the entries were more numerous than at Newport in 1927 is indicative of progress towards the North and East. The classes were strong and presented a pig of a type suggestive of utility merit of a high order.

GOATS.

There was a slight reduction in the goat exhibits, but otherwise this interesting section was strong enough to attract popular attention. The principal breeds were shown to advantage and visitors were able to form a good idea of the types of goat favoured in this country. As usual, most of the animals were shown by ladies who claimed practically all the prizes.

C. J. B. MACDONALD.

West End Farm,
Cheddington,
Leighton Buzzard.

REPORT ON NEW IMPLEMENTS ENTERED AT THE NOTTINGHAM SHOW, 1928.

THE miscellaneous implements submitted for the award of the Society's Silver Medal included machines for the following purposes: Harvesting, Cultivating, Dairying, Farm Improvement and Drainage, Power Generation, and Barnyard Work.

A detailed list of the entries is given on the following page.

In making the awards the Judges were influenced mainly by the following considerations:—

(1) That the implement must have a definite value for agriculture or estate purposes.

(2) That the implement indicates an advance in its application to agriculture.

(3) That the information supplied by the exhibitor respecting the performance of his implement was substantiated by inspection or trial.

(4) The novelty of the implement and the originality of the principle, process or mechanism involved.

(5) The economic importance of the implement in agriculture.

(6) The efficiency of performance; and

(7) The materials and method of construction and design.

Of the eighteen new implements entered, four were deemed by the Judges to satisfy the necessary conditions and were, therefore, awarded the Society's Silver Medal. Judgment on two entries was reserved for the Show of 1929 for the reasons given.

The remaining entries included many excellent examples of agricultural implements, some of which employed novel mechanical devices, but none were considered to be of sufficient merit to justify an award.

204 *Report on New Implements, Nottingham Show, 1928.*

Society's Catalogue No. of Entry	Nature of Implement	Exhibitor's Name and Address	Price	Remarks
268	Milking Machine	Gascoignes (Reading), Ltd., Reading	£ 75 0 0	Referred from 1927 Show.
269	Cream Separator	Melotte Separator Sales Co., Ltd., Counterslip, Bristol	upwards 2 10 0	
341	Side Delivery Rake, Front Action Swath	W. N. Nicholson & Sons, Ltd., Newark-on-Trent	25 0 0	
	Turner, Tedder and Back Action Swath			
342	Trip-action Self-acting Hay Rake	Ditto, ditto	14 5 0	
617	Mower fitted with new Patent Knife Head and Connecting Rod	Harrison, McGregor & Co., Ltd., Leigh	26 10 0	
752	2-Furrow Tractor Plough, "Weetrac"	Ransomes, Sims & Jeffries, Ltd., Ipswich	21 0 0	
1108	Oil Tractor	Locomobile Eng. Co., Ltd., 68 Victoria St., S.W.1	335 0 0	Referred from 1927 Show.
1111	Agricultural Tractor	Latil Industrial Vehicles, Ltd., Fulham, S.W.6	625 0 0	
1219	Poultry Plucking Machine	E. H. Bentall & Co., Ltd., Maldon	40 0 0	
1220	Grinding Mill	Ditto, ditto	18 7 6	
1366	Refrigerator	W. Rainforth & Sons, Ltd., Lincoln	165 10 0	
1461	Motor Cultivator, "Auto-Culto"	English Forestry Assoc., Ltd., Reading	35 0 0	
1481	Twin Miller Attachment for Rototiller 5	Piccard, Pictet & Co. (London), Ltd. (Simar Rototillers), 58 Compton Street, E.C.1	20 0 0	
1565	Root Thinner	T. B. Russell & Co., Ltd., Kirbymoorside	26 10 0	Referred from 1927 Show.
1576	Root Thinner	William Aitkenhead, Failsworth, Manchester	18 10 0	
1631	Ridging and Sowing Machine	A. W. Gower & Son, Market Drayton	19 0 0	
1644	Mole Drainer and Pipe Layer	Auto-Mower Engineering Co., Ltd., Norton St. Philip, Bath	(Not fixed)	
1645	Milking Machine fitted to Portable Milking Shed	Hosier Open Air Pure Milker, Ltd., Wexcombe, Marlborough	315 0 0	

The Society's Silver Medal was awarded in the following cases :—

Society's Catalogue No. of Entry	Nature of Implement	Exhibitor
1111	Agricultural Tractor	Latil Industrial Vehicles, Ltd.
1219	Poultry Plucking Machine	E. H. Bentall & Co., Ltd.
1576	Root Thinner	William Aitkenhead.
1645	Milking Machine fitted to Portable Milking Shed	Hosier Open Air Pure Milker, Ltd.
268	Milking Machine	Gascoignes (Reading), Ltd.
1644	Mole Drainer and Pipe Layer	Auto-Mower Engineering Co., Ltd.

and permission was granted for the following to be entered as New Implements at the 1929 Show :—

IMPLEMENTS AWARDED SILVER MEDAL.

Cat. No. 1111. Latil Agricultural and Forestry Tractor.

The tractor is driven by a 4-cylinder petrol engine of 18 H.P. rating, the maximum speed of the engine being 1,750 r.p.m., this being limited by a centrifugal governor. The gear-box is integral with the engine crankcase with which it forms a unit supported on the chassis at three points. The box is divided into two compartments, one of which contains three forward and one reverse set of gears, operated by a gate lever, the other compartment containing a range of three low ratio forward gears and one reverse operated by a second lever. The transmission is carried from the main gear shaft by fore-and-aft carden shafts, to differential gears mounted in suitable cases which are bolted to the chassis. From the differential boxes universally mounted shafts transmit the drive, through internal spur gearing to all four wheels of the vehicle. The latter gears are enclosed in oil-tight casings. A feature of the transmission is that both differential gears can be locked simultaneously by a lever operated from the driving seat. Brakes are provided both on the transmission and on all four wheels and each is easily adjustable. All four wheels are mounted on stub axles and the steering is controlled by a longitudinal shaft supported on the chassis near the offside. The steering is effected by a worm and sector gear. The tractor is supplied with disc wheels fitted with high-pressure pneumatic tyres and each wheel is equipped with 16 folding spuds arranged radially and hinged in such a manner that they can be either folded outwards beyond the tread of the tyre for field work, or inwards—towards the

centre of the wheel—for use on hard ground or road work. The spuds are retained in either the outward or inward position by strong springs consisting of flat blades of spring steel, and a special bar is provided for the purpose of changing from one position to the other. Three types of wheel are available. Provision is made on the tractor for fitting either a capstan or pulley. The tractor itself can be loaded up to one ton.

The provision of three field and three road speeds, combined with the facility with which the pneumatic-tyred wheels can be armed with spuds and vice versa, renders this tractor an exceedingly useful implement for dual duty. The peculiar construction of the folding spuds appears to be well designed to prevent serious clogging by clayey soil of the moving parts, and the action of folding them tends to dislodge any accumulation which may form during field work. When the tractor is turning in as small a circle as possible with the spuds in use, there is very little tendency for them to fold inwards of their own accord and thus come out of action. Fig. 1 illustrates the wheel for agricultural and road use.

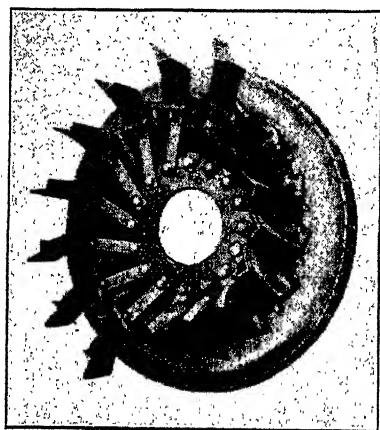


FIG. 1.

The tractor is exceptionally well sprung, and this, combined with the use of pneumatic tyres, conduces to considerable reduction in vibration and shock and enables the tractor to be used for heavy duty over rough ground without fear of damage.

Tests made with the object of determining the maximum power developed at the belt pulley indicate that the efficiency of the transmission gear in the pulley attachment is not as

high as might be expected and this was evinced by the heating of the pulley bevel drive during a prolonged test at full load.

The cost of the tractor is greater than is usual for this type of implement, but because of the many novel features incorporated in the design, the excellence of the design and construction, and the general utility of the tractor combined with its commendable performance under practical conditions, the award of the Society's Silver Medal was made.

Cat. No. 1219. Poultry-Plucking Machine.

This machine consists of two main parts namely, a suction fan and a device for plucking. The fan is about 2 ft. in diameter and is contained in a cast-iron casing, suction being at the centre, on one side, and delivery through a short spiral tube of rectangular section from the end of which a bag is hung for the reception of the feathers. The plucking device is supported

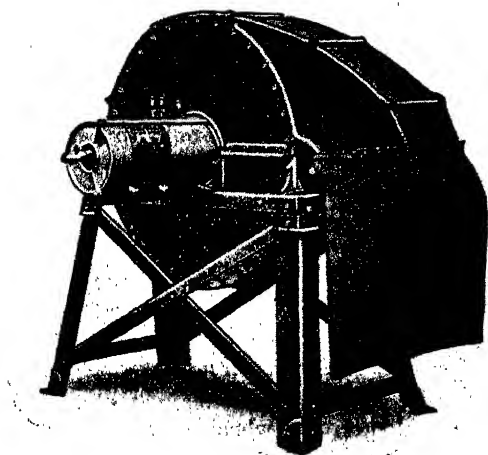


FIG. 2.—Poultry-Plucking Machine.

by the fan casing. It consists essentially of an outer tube about 8 in. diameter, an internal cylinder concentric with and driven by the fan shaft (which is extended through the device) and a stationary cast-iron shoe, located on the shaft, which is capable of slight radial motion under the action of two helical springs. The cylinder is a running fit in the outer tube and the cast-iron shoe conforms with the inside diameter of the cylinder and presses on its inner surface. The surface of the shoe is roughened in order to grip the feathers. In both outer tube and cylinder there are suitable apertures through which the

feathers are drawn by the fan. The gap in the outer tube is covered by a grid. The action of the machine when a bird is placed over the aperture is to suck the feathers through the grid where they are first wedged between the shoe and the cylinder and immediately afterwards, by further rotation of the latter, plucked from the bird. Still further rotation of the cylinder releases the feathers from between it and the shoe, and they are then drawn by the fan through the machine and delivered to the bag.

The machine exhibited was driven by a 2 H.P. Electric Motor and was stated to consume $1\frac{1}{2}$ to $1\frac{3}{4}$ H.P. except during the actual plucking operation when, owing to the partial closing of the intake by the bird, the consumption of power was reduced.

In a demonstration of the machine a freshly killed bird was plucked very cleanly in 90 seconds. Examination of the bird immediately afterwards and some minutes subsequently indicated no bruising or tearing of the skin. In addition, it was noted that the feathers were not soiled by the graphitic lubricant used in the machine. The quality of the work done was equivalent to that of a high standard of hand work.

The machine is undoubtedly of considerable importance to poultry farmers. It is well constructed and there is very little or nothing to get out of order. It would appear that some care is required in attending to the lubrication, but otherwise there is little likelihood of trouble with the machine after continuous operation.

The machine is quite novel and introduces a definite advance in the application of machinery to poultry farming, and for these reasons the Society's Silver Medal was awarded to the Exhibitors.

Cat. No. 1576. Root Thinner. William Aitkenhead.

The machine consists of two main parts, a horse-drawn fore-carriage mounted on two wheels and the thinning machine proper which runs on a pair of wheels arranged one in front of the other but not in the same plane. These wheels operate the hoes and are mounted on a frame which is pivoted on the axle of the fore-carriage and provided at the rear with a pair of handles for guiding and lifting the frame. The wheels actuating the hoes are spaced laterally a distance sufficient to bridge the line of plants and they are joined by a number of connecting rods with bearings at each end, the arrangement being similar to that of the side rod connection between the wheels of a locomotive with the difference that in the latter case the wheels are in the same plane. To the centre of each connecting rod is fitted a rocker bar the lower end of which carries a hoe, while the upper end, beyond the pivot, is constrained to move between



FIG. 3.—Root Thinner.

guide bars which gives the hoe the desired motion both on the cutting and return strokes. The axis of the rocker bar is arranged longitudinally so that the hoe moves in a direction approximately at right angles to the direction of motion of the machine. Each connecting rod is provided with a roller which takes the thrust of the hoe during the cutting stroke, thus relieving the connecting-rod bearings on the wheels from bending action. The spacing of the hoes round the periphery of the wheels is effected by three series of holes which allow of variation of plant spacing over a wide range. The hoe is detachable from the rocker bar and is adjustable along its length. It is arranged that on the return stroke of the hoe the latter receives a kick which is intended to dislodge any earth which may adhere to it during the cutting stroke. The machine is stopped or started by raising or lowering the steering handles, thus allowing the operator a fair degree of discrimination between the plants to be left and those to be removed. As the machine proper is pivoted about the axle of the fore-carriage and a fair length of steering handle is provided, the operator is given considerable mechanical advantage in lifting the weight of the machine by using the steering handles as a lever. This device renders the implement quite easy to operate. Ample provision is made for lubricating the working parts and the machine is soundly designed and rigidly constructed. The novelty of the design lies in the fact that the hoes are actuated mechanically in both directions, thus dispensing with the use of springs of any kind. It is realised that the quality of the work done by this machine may not be equal to that of hand labour, but in consideration of the methods by which the problem of root thinning has been attacked in this machine and the ingenuity displayed in its design, the Judges awarded the Society's Silver Medal.

Cat. No. 1645. Hosier Milking Machine fitted to portable Milking Shed.

The plant comprises a portable milking shed or bail on wheels and a power shed also on wheels. The system adopted is somewhat similar to the field milking plants used in New Zealand and Germany, and involves (1) keeping the cows out of doors all the year round, (2) the gradual movement of the bail over the fields to ensure even distribution of manure, and (3) the drawing of the milk into vacuum containers in which it is transportable. The milking bail is arranged to accommodate six cows. It is very rigid in design and is fitted with feeding hoppers which supply a measured quantity of cake to each cow. After milking and feeding the cow is released by pulling a cord and lifting a sliding door through which the cow passes. It is claimed that the sliding door is much superior to the hinged

door for the reason that it can be lowered right on to the ground. In this position, because no light appears beneath it, the door is unlikely to be damaged by the cow attempting to break underneath it, and further, draught is excluded from the milkers. The milking machine is designed to draw the milk from the cow and convey it through nickel-plated tubing into a churn or other container under vacuum which it does without the milk coming into contact with the air. If it is desired to record the quantity of milk given by a particular cow, an ordinary bucket plant can be used. The pulsators for the milking machine are very simple rotary valves and are operated by a square shaft from the engine shed. Special attention has been given to the method of cleaning the milking plant. Boiling water is sucked through the apparatus before milking commences and, for this purpose, a small portable boiler is provided. Immediately after milking and while the machine is still running, cold water is drawn through to wash off the milk. Secondly, hot water and a cleaning solution is drawn through. Finally, the boiler itself is carried round and boiling water—or steam—is sucked through the whole apparatus. The pipe line can be further cleaned by opening the end farthest from the container and introducing into it a plug of cotton-wool which is drawn through the pipe by the vacuum. The process of cleaning occupies from 10 to 15 minutes. The plant is suitable for milking 60 to 70 cows and requires one man and one boy. A small electric lighting set is installed.

The general design and construction of the milking bail and the engine shed is admirable and embodies many novel and ingenious features. The milking apparatus can be easily and thoroughly cleaned and, owing to the simplicity of its construction, the essential parts can be readily inspected, adjusted or replaced when required. The system as a whole is novel and the milking machine original, and there is reason to suppose that by their use clean milk can be produced at a lower cost than by existing methods. The system is especially adapted for poor dry soils.

The Judges considered that the exhibit as a whole is a successful departure from existing milking plants and of sufficient importance to justify the award of the Society's Silver Medal.

IMPLEMENTS DEFERRED.

Cat. No. 268. Milking Machine. Gascoignes (Reading) Ltd.

The complete milking machine comprises a vacuum pump, two sets of teat cups and two seamless milking cans incorporating pulsators in the lids. A stabilising tank with a draincock is fitted close to the pump. It is claimed for the teat cup that

the peculiar construction of the rubber "inflation"—which is moulded with spiral ribs—causes the collapse of the rubber to begin at the top and thus to produce a positive downward spiral squeeze on the teat. The method is stated to strip the teat with each pulsation and to milk the cow cleaner and faster than is possible with other makes of machine. It is also claimed that the spiral ribs on the rubber serve to reinforce it, and further, as the rubber is not stressed in tension when fitted in the teat cup, it does not absorb butter fats, both these features conducing to an increase in the life of the rubber. Another important claim by the exhibitors is that in this machine a vacuum of between 11 and 13 in., instead of the customary 15 in., suffices and that as a result the risk of injury to cows is reduced.

The machine was deferred from the 1927 Show in order that it could be tested to ascertain whether or not the claims made for it were substantiated. It is regretted that owing to the tests instituted not having been completed prior to the Nottingham Show, the Judges were unable to estimate the merits of the machine and had no alternative but to again defer judgment, giving permission for it to be entered in the 1929 Show.

Cat. No. 1644. Mole Drainer and Pipe Layer.

This machine comprises a tractor fitted with a winch and a separate self-lift mole plough of novel design. The power unit consists of an 11 H.P. 4-cylinder Coventry Simplex engine which develops 11 H.P. at 1,200 r.p.m. and 29 H.P. at 3,000 r.p.m. The engine is water cooled. The gear-box is integral with the engine crankcase and is fitted with gearing which gives three forward speeds and one reverse speed of the tractor. The winch is arranged with its shaft axis across the chassis and consists of an 8 in. diameter drum 17 in. long carrying 100 yards of $\frac{1}{2}$ in. diameter flexible-steel cable. The drum is driven from one end of a countershaft through machined spur gearing and the countershaft—which is arranged parallel to the drum shaft on the chassis—is driven from the engine through a flexible coupling and bevel gearing. The transmission to the road wheels is by chain drive on the countershaft. The gearing is such as to give a maximum speed of the tractor of 15 miles per hour. The weight of the tractor complete is 23 cwt.

The mole plough consists of a sheet steel skid bolted at the forward end of the main frame. It is fitted with a disc couler and a locking lever, the blade of the plough being pivoted by a single bolt in such a manner that it can rotate through an angle of 180 degrees or more between the bars forming the frame. The mole plough and blade are retained in the working position by a projection on the locking lever and the mechanism is such that when this projection—which acts as an abutment

for the blade—is lifted vertically by raising the lever, the mole and its blade are free to turn in a vertical plane about the pivot in the frame. The locking lever is formed with a bell crank and is pivoted near the forward end of the frame, and the short end of the bell crank is connected by a chain through a wooden shearing pin, passing through the frame, to the hauling cable. This arrangement constitutes an automatic safety device, for, should the plough encounter an obstacle, the wooden pin is sheared and the pull of the cable comes directly on to the bell crank lever, thus operating the cut out. Further motion forward causes the plough to rotate in the frame and rise to the surface of the ground.

The method of operation is as follows :—

The plough is set at the proposed line for the drain and the tractor is moved forward along the line, paying out its cable

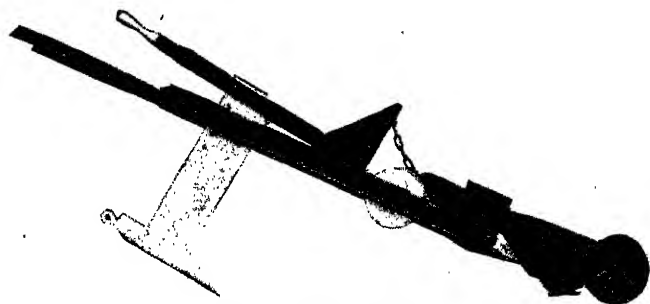


FIG. 4.—Mole Drainer.

to near the limit of its length. At this point the tractor is stopped and the winch gear put into action, and a sprag, which is fitted to the underside of the chassis, is dropped on to the ground. When hauling commences the sprag enters the ground to form an anchor. Subsequently, when the plough approaches near to the tractor, the hauling is stopped and the winch thrown out of action, after which the tractor again moves forward, pulling out the sprag and paying out cable. The operation is then repeated.

A special feature of the mole is the shearing nose which, instead of being of the usual "torpedo" shape, is formed by the section of an inclined plane and the cylindrical body of the mole.

In a demonstration on the Show Ground the tractor sprag buried itself in about 1 yard of travel, but when hauling was taking place the wheels of the tractor farthest from the mole were 3 in. above the ground; there appeared, however, to be no possibility of the tractor overturning. It was also apparent

that the inclusion of a reeling device for the cable would be an advantage. The action of the self-lift device was very satisfactory.

The machine is undoubtedly novel, being the first of its type, and the great advantage to be derived from its use is that it can be worked on ground which is not fit for direct haulage. There is also the further point that the full power of the engine can be utilised in hauling the mole alone, and not, as in direct haulage, of propelling the vehicle in addition. The method adopted for anchoring the tractor is likely to be quite satisfactory on the lightest soils, and there would not appear to be any difficulty in extracting the sprag from the heaviest soil. The provision of pneumatic tyres and a tractor speed of 15 m.p.h. renders the machine easily transportable, but it would seem that the machine might conceivably, with slight modification in essential details, be constructed for more purposes than mole draining alone.

The merits of the machine are undoubted and it is to be regretted that the exhibitors failed to comply with the Society's regulations governing the Silver Medal entries. For these reasons and the further reason that the machine was in a stage of development, it was decided to defer judgment on it and allow the exhibitor to enter it in the 1929 Show as a new implement.

IMPLEMENTS FOR WHICH NO AWARDS WERE MADE.

Cat. No. 269. Attachments for Melotte Cream Separator.

(a) *Emulsifier Attachment.* In this device, which is fitted to a Melotte Cream Separator, the ordinary bowl of the machine is replaced by a special emulsifying bowl and the process of separation of fat from milk is reversed. The skimmed milk immediately after separation is placed back in the reservoir and the fat to be added—which is described as Melottine—is first melted and then poured into an auxiliary tank supplied with an outlet pipe fitted with a regulating cock. After adjustment the machine is run in the usual manner.

The novelty of the device lies in the use of a cream separator as an Emulsifying Machine, and there is no doubt that the process of emulsification can be carried out efficiently and with greater expediency by using the attachment than by hand-stirring. It was recognised that the attachment had a decided value in certain circumstances, but the opinion was formed that the economic importance and novelty of the device did not justify an award.

(b) *Milk-testing Apparatus.* This apparatus is designed with the object of using the Melotte Separator as a centrifuge for carrying out the well-known Neusal test instead of employing

a special centrifugal machine for the purpose. The device comprises a special plate and cover fitted to the Melotte Separator and an extension of the spindle of the machine is provided for driving the attachment. The necessary butyrometers, pipette, automatic measure, test tubes and solutions are supplied with the outfit.

It will be noted that the Neusal test, which involves the use of alkalines and non-corrosive liquids, is employed ; but nevertheless, it is open to question whether or not it is desirable to conduct chemical control experiments in machines used for food production. In view of this fact and also that the attachment did not indicate any material advantage to be gained from its use, except in a minor degree, no award was made.

Cat. No. 341. Side Delivery Rake. W. N. Nicholson & Sons.

The chief points of note in this implement are : (1) a totally enclosed gear-box containing a simple 2-speed reverse gear for providing forward motion for raking and front-action swath turning, and a higher speed reverse action for back-action swath turning and tedding, the latter being claimed as a novel method of swath turning ; (2) rake bars equipped with reversible curved tines which can be set for either direction of motion ; (3) a stripper board, the position of which can be adjusted by vertical stays clamped to the frame, the clamps being provided with screws for the adjustment of the board with respect to the rake bars ; (4) the flyer spindles are mounted in roller bearings which are self-oiling and provided with efficient dust-proof protection ; (5) specially shaped hub on the castor wheel provided with a tongue to prevent hay from winding round it ; (6) an extremely efficient method of supporting the detachable rake bar section, which very effectively retains and locks them in position while at the same time renders them easily removable when necessary.

The machine is robust and well constructed and the employment of protected self-oiled roller bearings in important places in the mechanism is a step in the right direction in the improvement of this type of implement.

The makers are to be commended on the production of a high-class implement combining many minor improvements, but it was considered that the improvements made were not of sufficient importance to justify an award.

Cat. No. 342. Trip-action Self-acting Hay Rake. Nicholson.

In this implement the mechanism is completely controlled by a single foot pedal by means of which the operator can either engage the pawls for tipping the rake, hold the rake in the raised position for turning and travelling, or retain it in the

working position. The mechanism is such that the foot pedal is very light to use and smooth in its action.

The machine is undoubtedly very well constructed and of good materials, but it was considered that there was not sufficient novelty either in the general arrangement or in the detail of the mechanism to warrant an award.

Cat. No. 617. Mower fitted with new Patent Knife Head and Connecting Rod. Harrison McGregor & Co.

This device consists of a replaceable case-hardened steel bush for the knife head and a detachable hardened connecting rod pin, and it is intended to eliminate the necessity for replacing the knife head and of reforging a new end on the connecting rod when serious wear has taken place. The difficulties of fitting a reforged connecting rod include adjustment of length and twist, and are well known; the fitting of a separate pin to the rod is a very simple matter and no adjustment is necessary. It is claimed for the device that owing to the hardened surfaces of the bush and the pin wear is greatly reduced and because of this fractures of the knife seldom occur. It would appear, however, that the makers might have gone a step further and protected the bearing from the ingress of dirt which contributes far more to the wear than any other cause.

As a means of making a cheap and rapid replacement of worn parts the device is to be welcomed, but in this instance also there was insufficient outstanding merit to justify an award.

Cat. No. 752. 2-Furrow Tractor Plough, "Weetrac": Ransomes, Sims & Jefferies, Ltd.

This plough is designed primarily for direct attachment to a Fordson Tractor, and it was stated that its adaptation to other makes of tractor was under consideration. The implement is convenient for use in hop and fruit gardens and similar places where it is a distinct advantage to be able to turn in a small radius and also to back the plough. An important feature is the adjustment provided for compensating for a lateral tilt of the tractor which would occur in the case when the right-hand tractor wheels were running in an open furrow. The adjustment is made by means of a handle placed under the driver's seat. Simple adjustments are also provided for pitch and for the depth of ploughing. Disc coulters are fitted as standard, but ordinary knife coulters and skim coulters can be substituted if preferred. The plough can be raised and lowered from the driving seat by means of a lever, the pull on the lever being assisted by long helical springs.

It would appear that in its present form the application of the implement is limited to one type of tractor; and further,

that if an obstacle were encountered, the plough would be subjected to considerable stress for the reason that it is rigidly attached to the tractor. No award was made.

Cat. No. 1108. Oil Tractor. Locomobile Engineering Co., Ltd.

This machine is a 4-wheeled tractor propelled by a valveless single-cylinder 2-stroke engine of the semi-Diesel type with self-ignition, forced lubrication and spring-loaded shaft governor. The engine is hopper cooled and is rated at 22-28 H.P., normal speed 500 r.p.m. It can be run on crude lignite tar, gas, and paraffin oils, and the consumption is stated to be $\frac{1}{2}$ -lb. of fuel per brake horse-power hour. A 4-speed gear-box is fitted and all speeds are available in reverse by changing the direction of the engine. The engine and gearing are totally enclosed. The starting of the engine is effected by means of a blow-lamp heating a hot bulb.

The tractor is well constructed throughout, but it would not appear to be a handy general purpose machine. It would be expected that the hot bulb method of starting would occasion some difficulty to the unskilled man, as might also the changing of the direction of rotation of the engine for reversing, the latter operation requiring some skill. It would also appear that if the tractor were stopped for more than a few minutes the blow-lamp would be again required to restart it. In tests made the actual quantity of cooling water required on the field was 4 gallons per hour, which is excessive.

This machine was deferred from the 1927 Show in order that tests of its performance could be made. It is regretted that the results of these tests show that the performance of the tractor under varying conditions is not of sufficient outstanding merit to justify the award of the Society's Silver Medal.

Cat. No. 1220. Grinding Mill. E. H. Bentall & Co., Ltd.

The attachment to the mill consists of (1) a grain elevator comprising a series of buckets spaced on a 3-ply balata belt, the whole totally enclosed in a wooden casing; (2) a loading platform and a receiving board, the latter working on a crank to receive the grain sack and to shoot its contents into the compartment at the base of the elevator.

The novelty of the exhibit lies in the latter device and in the fact that the reciprocating feed to the mill is eliminated.

The attachment is useful where material to be ground is stored on the same floor as the mill, where it saves lifting of the bags to the height of the mill hopper. In the small machine exhibited there did not appear to be any appreciable saving of labour to be expected from its use. No award was made.

Cat. No. 1366. Refrigerator. W. Rainforth & Sons, Ltd.

This refrigerator is of the ammonia (intermittent) absorption type, the energy for its action being applied in the form of heat supplied by Primus burners using paraffin oil. In operation the plant needs only unskilled attention and is suitable for use in remote country districts where gas and electricity are not available. The basic principle of the design is not new, in fact, many similar machines have been on the market from time to time. In practice it is considered that the plant would require something like 200 gallons of cooling water per operation, and although on occasion it might be arranged to employ the same water over and over again, such a quantity might prove a serious drain on the water supply of many farms. It might even occur that extra cost in operation would be involved in pumping cooling water.

It would appear that the plant is not likely to give trouble or fail to function and the cost of the fuel consumed, if running continuously, would not be great; nevertheless, the coefficient of performance is extremely low, being only about one-fifteenth, and this value is only one-fifth of what might be expected for this type of plant. No award was made.

Cat. No. 1461. Motor Cultivator, "Auto Culto." English Forestry Association, Ltd.

This implement consists of a small 2-wheeled tractor driven by a $1\frac{1}{2}$ H.P. 2-stroke air-cooled petrol engine. The transmission from the engine to the land wheels is by gear drive and the land speed is variable up to 200 ft. per minute. It is arranged that the wheel track is variable, the normal width of track being 20 in. A pair of guiding handles attached to the body of the tractor is provided, and on these are mounted the engine control lever and the lever operating the dog clutch for the power transmission. The implement straddles crops planted in narrow rows and works between those planted at a greater distance. It is operated by one man. Several kinds of tools can be supplied for use with the machine, including furrows, cultivator teeth, ploughs and rakes, and all these are readily detachable and interchangeable.

The machine is soundly constructed and it appeared to be capable of doing the work for which it is designed. It was considered, however, that the excessive vibration and noise, combined with the effort of handling the machine, particularly during turning, would impose too great a strain on the operator if working continuously for any length of time. No award was made.

Cat. No. 1481. Twin Miller Attachment for Rototiller 5. Piccard, Pictet & Co. (London), Ltd. (Simar Rototillers.)

This implement is intended for cultivating between the rows of root crops, and it is arranged that the machine straddles the row and cultivates on each side of it. It consists essentially of an attachment which can be fitted to the standard Simar Rototiller comprising two rotary cultivators of the Simar Type.

The complete implement is driven by a 5 H.P. 2-stroke petrol engine air-cooled by a turbo fan, and driving direct without belt or chain. Two speeds are provided for the land wheels and one (150 r.p.m.) for the Rototiller. There is a clearance of 9 in. under the machine, and a width of ground of 10 in. on each side is cultivated with a 6-in. gap between.

A demonstration indicated that the implement would break up and aerate the ground to a greater extent than a horse-hoe, but that it would not deal so effectively with weeds. It is realised, however, that the implement could be used on ground which might be too hard for horse-hoeing. During the demonstration the tiller threw back the soil with considerable force, sufficient to raise the hinged covers at the rear of the machine and, in addition, there was very considerable vibration and noise from the engine and rototiller. The effective use of the implement is limited to rows of 16 in. to 20 in. apart. No award was made.

Cat. No. 1565. Root Thinner. T. B. Russell & Co., Ltd.

The machine consists essentially of two lightly constructed land wheels, one of which carries a series of hoes mounted on pivots attached to the hub. The hoes are operated only at the bottom centre and each hoe works in a guide and moves in a direction at right angles to the land wheel track; they are actuated on the cutting stroke by a cam and are returned to their original positions by small helical springs. The return stroke of the hoe is made in two jerks in order that it may be free from earth which may adhere to it during the cutting stroke. The depth-regulating device is operated by a worm and worm wheel, and the hoes are put in and out of action by a lever which can be operated by the driver. This allows of some discrimination when hoeing patchy crops. Adjustment of the gap is provided for by fitting extension pieces to the hoes. The latter are made reversible and of different widths on each side for adjustment. The machine designed for the turnip and sugar beet grower leaves the plants 12 in. or 6 in. apart with a 10 in. reversible hoe, and 10 in. or 5 in. apart with the 8-in. hoe. The return action of the hoes by helical springs appears to be a weak point. The machine exhibited had been newly painted and it was noted that the paint adhering to the mechanism was

sufficient to resist the return of the hoes to their original positions. Under the conditions, therefore, in which the implement would often have to work it is conceivable that the return action would not function with certainty—a result which would be disastrous to the crop if the machine was not carefully watched.

The machine had been deferred from the 1927 Show in order that The Institute of Agricultural Engineering of Oxford might have an opportunity of carrying out tests with it on the land. Tests were made in June last, but it is regretted that the results obtained indicate that further development of the machine is necessary in order to achieve the desired result. In view of this no award was made.

Cat. No. 1631. Ridging and Sowing Machine. A. W. Gower & Son.

This implement is designed to perform the operations of ridging and sowing simultaneously and also for sowing on flat ground. Two adjustable moulding blades are mounted, one on each side of a drill coulter. These blades are curved in such a manner that they scrape up the soil and turn it inwards, forming a ridge and thus reversing the action of the ordinary ridge plough. The depth of the drill coulter is adjustable so that the seed can be sown at any desired depth. The machine exhibited was arranged for sowing two ridges at the same time and it was claimed that 1 horse, 1 man and a boy using the implement could do the work of two ridge ploughs and 1 root drill requiring 5 horses and 4 men to operate, thereby not only reducing the labour required but greatly facilitating the work. The machine may also be used for ridging potatoes provided the coulters are detached. It is considered in this machine that the basic principle involved in its operation, namely, that of ridging and sowing in one operation, is open to question, and it was, therefore, not found possible to make an award.

GENERAL REMARKS.

The standard of design and workmanship in practically every implement exhibited was well up to that usually associated with agricultural machinery. There were, however, a few instances where manufacturers had not taken full advantage of modern methods of production and materials.

An outstanding feature was the introduction of protected bearings, and in this connection those fitted on the Nicholson Triple-Action Swath Turner deserve particular mention. In many cases in the design of agricultural machinery the protection of a bearing from the ingress of dirt is of more importance than accuracy of construction and the quality of materials

employed, for, should a bearing become choked with grit, the advantages gained by precision in manufacture and the use of special materials are partly annulled.

It appears to be recognised that no reliance can be placed on the plain oil hole as a means of introducing lubricant to an important part, for should the hole be very small it rapidly becomes choked, while, on the other hand, if it is made of large diameter, dirt and grit are carried in with the lubricant, thus forming a "lapping" compound which very soon causes such excessive wear that the lubricant cannot be retained in the bearing. In this connection the introduction of methods of protection and lubrication of running parts similar to those successfully employed in other branches of engineering would be welcome.

The Judges desire to record their appreciation of the assistance afforded them by the Society's Consulting Engineer and of the work carried out by the Institute of Agricultural Engineering, Oxford, prior to the Show, which greatly facilitated the task of judging the merits of the various implements on the show ground.

JAS. H. HYDE.

The National Physical Laboratory,
Teddington.

REPORT OF THE STEWARD OF DAIRYING, NOTTINGHAM SHOW, 1928.

MILK YIELD TRIALS

(CATTLE, CLASSES 213 TO 223).

THESE trials were carried out at the Society's Dairy at Nottingham on the same lines and under the same conditions as those at Newport in 1927; exhibitors having the option of having their cows milked twice or thrice in the 24 hours, but only on the condition that the division in which their cows should be placed must be stated on the entry form, in default of which the animals would be entered as twice milkers only.

The times for carrying out the trials were as follows:—

For stripping cows twice milked, 5.30 p.m. on Wednesday, while for stripping cows milked thrice 8 p.m. was the hour fixed.

The times for milking on Thursday were as below:—

Thrice-milked cows, 5.30 a.m., 12 midday and 8.0 p.m.
Twice-milked cows, 6.30 a.m. and 5.30 p.m.

These times were arranged so that all the animals should be milked in daylight and that the milkings of the two divisions might be kept distinct.

As at Newport, different coloured labels were used on the buckets :

Thrice-milked cows, red labels ;

Twice-milked cows, white labels ;

Butter Test Cows, yellow labels. These were used in addition to the red and white labels.

The bottles for taking samples of the various milks were labelled to correspond with the numbers on the milk pails, the samples in every case being taken from the milks as they were being poured back from the weighing machine pail into their own labelled pails, thus ensuring that the sample milks were thoroughly representative of the bulk.

The Champion Prizes offered by a Society interested in the production of milk were awarded as follows :—

CLASS A, for Dairy Shorthorn, Lincolnshire Red Shorthorn, South Devon, Red Poll, Blue Albion and British Friesian.—Champion Prize, £30, to Mr. E. G. Barton's British Friesian Cow "Chaddesley Hedge Rose 2nd," with the remarkable yield of 102 lb. Reserve No., £5, to Lieut.-Col. C. W. Birkin's British Friesian "Bramcote Agatha," with a yield of 77 lb. 12 oz.

CLASS B, for Ayrshire, Jersey and Guernsey.—Champion Prize, £20, to Mr. Grosvenor Berry's Jersey "Postmistress," with a yield of 73 lb. Reserve No., £5, to Mr. David Wallace's Ayrshire, "Auchenbrain Big Kate 13th," with a yield of 68 lb. 4 oz.

CLASS C, for Kerry and Dexter.—Champion Prize, £10, to Captain Nelson Zambra and Mr. C. W. Milne's Kerry "Hattingley Belle," with a yield of 63 lb. 12 oz. Reserve No., £5, to Mrs. F. Atherton Brown's Dexter "Bourton Hill Myrtle," with a yield of 46 lb.

Only 79 cows out of an entry of 137 arrived in the milking-out yard to compete for the Milk Yield prizes.

Full particulars of the Trials with the Prizes awarded are given on Table I, while Table II gives the average results of the different breeds competing.

TABLE I.—MILK YIELD CLASSES AT NOTTINGHAM, 1928.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calving	No. of days in milk	Date of last service	Milk Yield				Average Fat per centage	Points		Awards and Remarks
								Morning	Noon	Evening	Total		Milk	Lactation	
			Lb.				1928	Lb. oz.	Lb. oz.	Lb. oz.	Lb. oz.				
Class 215															
		Dairy Shorthorns, Twice Milked.					1928								
1398	C. J. Allday	Dunlop Charm	1379	July 10, 1919	June 26	15	—	23 6	19 0	21 0	63 8	3.28	63.58	13-12	NH
1399	Kinner Bros.	Dunlop Charm	1466	Dec. 27, 1919	June 6	35	—	28 12	20 4	22 4	69 4	2.90	68.50	13-12	NH
1400	Buskirk Bros.	Longhills Carrie 2nd	1421	Mar. 25, 1919	June 11	30	—	31 4	15 12	21 0	67 6	2.90	68.00	13-12	NH
1441	The Duke of Westminster	Lady Winona 17th	1274	July 19, 1919	June 10	31	—	35 0	13 8	13 0	61 8	4.88	46.50	10-52	N.H.
1445	Chalkfield Daffodil 7th		1435	Oct. 23, 1922	May 7	65	July 6	24 12	19 0	22 8	66 4	2.66	66.25	10-64	2-80
1449	Mr. R. E. Fuller	Lady Dancer 9th	1703	Oct. 23, 1922	April 4	98	—	21 8	13 4	17 0	51 12	3.35	67.15	13-40	5-00
1450	Mr. J. H. M. Jones	Rockley Harrington 8th	1470	Aug. 25, 1923	May 28	46	—	16 4	12 8	15 4	44 0	3.45	44.00	14-50	0-60
1481	James H. Tenney	Ashe Lady Hudson	1004	Sept. 3, 1924	May 23	49	—	17 0	11 8	14 0	42 8	2.90	54.75	13-12	0-90
1493	The Marquis of Zealand, K.T.	Nora	1120	Sept. 24, 1924	May 14	53	—	21 12	10 12	13 8	57 0	2.60	57.00	10-00	1-80
Class 216															
		Dairy Shorthorns, Twice Milked.					1928								
1440	Major G. Miller Mundy	Sweet Barbara 11th	1407	Dec. 22, 1919	June 3	38	—	29 0	—	23 0	52 0	3.15	52.00	13-60	NH
1465	Major G. Miller Mundy	Brookhurst Strawberry 2nd	1805	Mar. 23, 1924	April 30	72	—	23 4	—	24 12	48 0	2.70	48.00	11-00	2-20
1492	H. Macdonald	Ashe Foggathorpe	1330	Sept. 12, 1924	June 21	20	—	28 8	—	25 8	54 0	3.37	54.00	13-48	NH
1522	A. E. Wrigley	Edinburgha With Rose	1043	Sept. 14, 1925	April 13	39	—	14 0	—	12 0	26 0	1.47	26.00	5-68	4-00
Class 217															
		Lincolnshire Red Shorthorns, Twice Milked.					1928								
1345	B. G. Bowser	Southern Mirens 3rd	1400	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1346	B. G. Bowser	Southern Mirens 3rd	1385	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1392	B. G. Bowser	Southern Mirens 3rd	1386	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1393	B. G. Bowser	Southern Mirens 3rd	1387	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1394	B. G. Bowser	Southern Mirens 3rd	1388	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1395	B. G. Bowser	Southern Mirens 3rd	1389	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1396	B. G. Bowser	Southern Mirens 3rd	1390	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1397	B. G. Bowser	Southern Mirens 3rd	1391	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1398	B. G. Bowser	Southern Mirens 3rd	1392	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1399	B. G. Bowser	Southern Mirens 3rd	1393	May 12, 1923	May 30	49	—	27 4	10 0	22 12	74 0	3.20	74.00	12-80	0-60
1371	Shade & Merton	Willards Wick	1617	Sept. 30, 1923	June 18	26	—	24 12	20 0	23 0	67 12	3.31	67.25	13-60	0-60
1378	F. Russell Wood	Bendish Sunbeam 6th	1687	Dec. 20, 1921	May 10	53	—	25 8	21 0	23 12	69 4	3.31	69.25	14-04	1-60
Class 218															
		Lincolnshire Red Shorthorns, Twice Milked.					1928								
1354	Chivren & Son, Ltd.	Bendish Cherry 8th	1652	Sept. 14, 1919	May 27	45	—	40 0	—	35 12	75 12	3.35	75.75	13-40	0-60
Class 219															
		South Devon, Twice Milked.					1928								
1318	John Wakeham	Rowden Palenore	1603	Aug. 5, 1923	June 2	39	—	20 12	23 8	23 4	65 8	3.63	65.50	14-32	NH
Class 220															
1351	Mr. R. M. Foot	Red Polls, Twice Milked.	1351	Aug. 26, 1919	May 24	43	—	22 0	15 0	19 0	56 0	3.63	56.00	15-72	0-90
1353	Major J. A. Morrison	White Hill Molly	1353	Jan. 26, 1922	May 7	65	—	16 4	11 8	14 4	42 0	3.26	42.00	13-12	2-60
1358	Major J. A. Morrison	Springhill Arden	1358	Jan. 26, 1922	May 7	65	—	16 4	11 8	14 4	42 0	3.26	42.00	13-12	2-60

1650	W. A. Argent . . .	Garnsey, Twice Milked.	1057	Oct. 14, 1919	April 3	99	July 1	24 4	—	20 8	44 12	4 05	44-75	16-20	5-90	66-85	H.C.
1655	Capl. R. Jenkins . . .	Dairy Maid of Alderney 6th.	1831	June 18, 1921	Dec. 29	49	—	24 4	—	23 0	40 4	2 77	46-25	11-05	6-90	58-23	Fat below Standard
1671	Eustace R. Palmer . . .	Trequeen Mens 4th . . .	1232	Jan. 22, 1921	Dec. 29	195	Mar. 17	24 0	—	23 0	40 4	4 15	44-75	13-05	12-00	72-35	Second Prize
Class 221																	
1766	Grosvener Berry . . .	Jeney, Twice Milked.	910	Jan. 23, 1922	April 23	74	June 15	32 0	19 8	21 8	73 0	3 90	73-00	15-60	3-40	92-00	First Prize and Champion, Section B
1767	George Cross . . .	Duran . . .	955	Mar. 4, 1923	April 27	75	—	23 8	16 8	14 4	54 4	3 83	54-25	15-32	3-50	73-07	H.C.
1768	Sir H. Gold Mackintosh . . .	Rustan Twin . . .	777	Jan. 8, 1923	April 29	43	—	19 4	13 0	15 0	46 4	5 05	46-25	20-20	0-80	66-75	H.C.
1778	Cortlandt Taylor . . .	Nobody's Pet . . .	805	May 15, 1923	Jan. 25	168	June 16	15 12	11 0	13 4	40 0	4 95	40-00	19-80	4 00	63-80	H.C.
1760	Capl. F. B. Imbert . . .	Jeney, Twice Milked.	963	Aug. 19, 1922	Feb. 26	198	—	26 4	—	20 8	46 12	4 75	46-75	19-00	2 00	67-75	H.C.
1761	Capl. F. B. Imbert . . .	Blue Hayes Bamcock . . .	910	Dec. 16, 1917	April 24	78	—	33 0	—	23 8	56 8	4 75	56-80	19-00	3 60	70-13	Third Prize
1766	J. Pierpont Morgan . . .	Hins Hayes Sporan . . .	828	June 16, 1923	June 15	25	—	19 4	—	15 4	34 8	4 55	34-50	18-20	NH	52-70	—
1767	J. Pierpont Morgan . . .	Hins Hayes Sporan . . .	828	June 16, 1923	June 15	25	—	19 4	—	15 4	34 8	4 55	34-50	18-20	NH	52-70	—
1776	E. A. Strass, M.P. . . .	Oliver's Belle . . .	896	June 11, 1921	May 20	63	—	14 8	—	13 0	27 8	6 30	27-50	25-20	1 20	53-90	Second Prize
1779	Dr. Herbert Watson . . .	Blackberry Lady . . .	947	April 29, 1921	Dec. 18	205	Mar. 11	23 8	—	23 4	51 12	4 32	51-75	17-23	12 00	81 03	H.C.
1780	Dr. Herbert Watson . . .	Blackberry Lady . . .	947	Aug. 16, 1921	Feb. 2	169	May 21	23 0	—	16 12	36 12	5 20	36-75	20-80	8 00	65 00	H.C.
1781	Dr. Herbert Watson . . .	Blackberry Lady . . .	947	Dec. 30, 1916	Mar. 23	110	June 14	23 0	—	20 8	44 4	4 00	44-25	23-40	7 00	72 05	R.N.
1782	Dr. Herbert Watson . . .	Blackberry Lady . . .	947	Aug. 19, 1923	Jan. 18	177	Mar. 24	24 4	—	21 0	43 8	5 07	43-25	23-83	8 00	75 38	Fourth Prize
1783	Dr. Herbert Watson . . .	Blackberry Lady . . .	947	Dec. 30, 1921	Jan. 18	183	May 19	23 12	—	20 12	42 12	4 62	42-75	18-03	4 9	65 73	Fifth Prize
1792	H. Cecil Felly . . .	Blackberry Lady . . .	783	Feb. 11, 1923	Mar. 1	183	May 24	17 8	—	14 8	32 0	4 17	32-00	16-63	9 3	57 83	H.C.
1797	Grosvener Berry . . .	Don't Forget . . .	783	Jan. 11, 1923	Mar. 1	183	May 24	17 8	—	14 8	32 0	4 17	32-00	16-63	9 3	57 83	H.C.
Class 222																	
1843	Kerry Estates, Ltd. . . .	Kerry, Twice Milked.	1008	Mar. 18, 1921	June 5	86	—	19 0	11 8	14 8	45 0	4 25	45-00	17 00	NH	62 00	Third Prize
1845	John Wm. Towler . . .	Valencia Sunflower . . .	826	Mar. 26, 1918	May 23	44	—	19 0	11 12	13 4	44 0	3 91	44-00	15-64	0 40	60 04	First Prize and Champion, Section C, and Dexter Challenge
1845	Capl. Nelson Zambra . . .	Vaddy Trent 4th . . .	917	May 6, 1923	May 14	58	—	24 0	18 12	21 0	63 12	3 31	63-75	13-24	1 80	78 79	Second Prize and "Film-burst" Challenge
1837	Laurence Curdie . . .	Kerry, Twice Milked.	1022	Dec. 12, 1921	June 15	25	—	21 12	—	21 4	43 0	3 12	45-00	12 48	NH	55 48	H.C.
1850	Emhurst Farming & Trading Co., Ltd. . . .	Minley Marnard . . .	1022	June 7, 1920	May 9	63	—	30 0	—	27 8	57 8	2 60	57-60	10 40	2 30	70 20	Fat below Standard
1842	Mrs. Freeland . . .	Valencia Joan . . .	894	Feb. 16, 1918	April 30	72	—	23 12	—	19 0	42 12	3 70	42-75	14 80	3 20	69 76	Fourth Prize
1844	M. F. E. Sutton . . .	Fallas Fairy . . .	917	July 7, 1924	May 26	47	—	24 12	—	22 4	47 0	4 52	47-00	10 05	0 70	60 76	Fourth Prize
Class 223																	
1866	Mrs. F. Atherton Brown . . .	Devon, Twice Milked.	770	1920	May 5	67	—	26 12	—	19 4	48 0	5 02	48-00	20 08	2 70	68 76	First Prize and R.N. Champion, Section C, and Dexter Challenge
1861	Henry Fisher Earl . . .	Bridgeland . . .	701	About 1918	April 29	73	July 2	23 12	—	20 8	44 4	4 12	44-25	16 48	3 20	64 08	Second Prize
1864	W. Lindsey Everard . . .	Gert Frimble 7th . . .	749	April 24, 1916	May 8	64	—	20 0	—	19 12	39 12	3 80	39-75	15 20	2 40	57 85	R.N.
1868	Mrs. Howard Palmer . . .	Brokenhurst Syrius . . .	616	July 10, 1922	May 24	48	—	21 8	—	19 4	40 12	4 17	40-75	16 68	0 8	58 23	Third Prize

TABLE II.—*Average Results obtained from Cows of different Breeds in the Milk Yield Classes.*

No. of Cows Competing	Breed	Live Weight	Days in Milk	Milk	Fat per cent.	Points
		Lb.		Lb. oz.		
13	Dairy Shorthorns	1354	49	52 14 ⁶ / ₁₃	3.17	67.09
8	Lincoln Red Shorthorns	1599	36	66 13	3.62	81.88
1	South Devon	1603	39	65 8	3.58	79.82
4	Red Polls	1351	54	56 6	3.35	71.50
2	Blue Albions	1503	18	61 0	3.16	73.64
14	British Friesians	1479	54	66 12 ⁷ / ₈	3.19	80.10
2	Ayrshires	1267	63	66 4	3.50	82.60
9	Guernseys	1082	79	49 3 ⁵ / ₈	3.80	68.05
15	Jerseys	870	113	45 0	4.85	69.91
7	Kerrys	938	49	49 0	3.63	64.72
4	Dexters	741	63	42 11	4.27	62.09

As at Newport, a further table (Table III) showing differences between the thrice and twice milkers is given for future use.

BUTTER TEST TRIALS.

As in the Milk Yield classes, the number of animals competing in these Trials was comparatively small, only 50 out of an entry of 82 being present, the smallest number of cattle that have competed for these prizes for many years.

In addition to the division into cows milked thrice and twice, the animals were still further divided into classes for cows over and under 900 lb. live weight of all breeds.

Table IV gives the full results of these Trials, with the awards earned by the various animals in the two Classes over and under 900 lb. live weight.

TABLE III.—Average Results obtained from Cows milked Thrice or Twice in the 24 Hours in the Milk Yield Classes.

Breed	No. of Cattle	Live Weight	Days in Milk	Milk	Fat per cent.	Points
		Lb.		Lb. oz.		
<i>Dairy Shorthorns.</i>						
Milked thrice	9	1369	47	56 6½	3.40	71.23
Milked twice	4	1321	54	45 0	2.68	57.76
<i>Lincoln Red Shorthorns.</i>						
Milked thrice	7	1592	35	65 8½	3.66	80.77
Milked twice	1	1652	45	75 12	3.35	89.65
<i>South Devon.</i>						
Milked thrice	1	1603	39	65 8	3.58	79.82
<i>Red Polls.</i>						
Milked thrice	4	1351	54	56 6	3.35	71.50
<i>Blue Albions.</i>						
Milked twice	2	1503	18	61 0	3.16	73.64
<i>British Friesians.</i>						
Milked thrice	14	1479	54	66 12½	3.19	80.10
<i>Ayrshires.</i>						
Milked thrice	2	1267	63	66 4	3.50	82.60
<i>Guernseys.</i>						
Milked thrice	6	1087	62	51 3½	3.88	69.00
Milked twice	3	1073	114	45 4	3.65	66.14
<i>Jerseys.</i>						
Milked thrice	4	864	90	53 6	4.43	73.90
Milked twice	11	872	106	41 15	4.90	68.10
<i>Kerrys.</i>						
Milked thrice	3	917	46	50 14½	3.82	66.94
Milked twice	4	953	51	47 9	3.48	63.05
<i>Deasters.</i>						
Milked twice	4	741	63	42 11	4.27	62.09

TABLE IV.—RESULTS OF BUTTER TESTS AT NOTTINGHAM, 1928.
CLASS 224A.—COWS EXCEEDING 900 LB. LIVE WEIGHT.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last service	Milk yield in 24 hours	Butter yield to lb. milk	Ratio of lb. milk to lb. butter	No. of points for quality of butter	No. of points for quantity of butter	Total No. of points	Awards and Remarks.
			Lb.		1923		1928	Lb. oz.	Lb. oz.					
1130	Kidner Bros.	Dairy Shorthorns. Thrice Milked.												
1141	Eustace Abel Smith	Dalby Princess . . .	1456	Dec. 27, 1919	June 6	35	—	69 4	2 9½	26.69	41.50		41.50	H.O.
1156	Robert N. Tery	Loughilla Carrie 2nd . . .	1421	Mar. 22, 1919	June 11	30	—	68 0	2 10½	25.75	42.25		42.25	H.O.
		Rockley Barrington 8th . . .	1470	Aug. 25, 1922	May 26	46	—	44 0	1 11½	25.60	27.50		28.10	—
1140	Major G. Miller-Mundy	Dairy Shorthorns. Twice Milked.												
1407	Sweet Barbara 11th . . .		1407	Dec. 22, 1919	June 3	38	—	52 0	1 4½	40.53	20.50		20.50	Ratio over 30
1405	Major G. Miller-Mundy	Brackenhurst Strawberry 2nd	1505	Mar. 23, 1924	Apr. 30	72	—	49 0	1 4½	37.46	20.50		23.70	Ratio over 30
1265	John Evens & Son	Lincoln Red Shorthorns. Thrice Milked.	1799	Apr. 10, 1921	June 13	28	—	65 4	2 11½	24.00	43.50		43.50	H.O.
1268	John Evens & Son	Burton Irene 2nd . . .	1456	May 26, 1923	June 26	15	—	64 4	2 13½	22.59	45.50		45.50	H.N.
1264	Chivers & Sons, Ltd.	Lincoln Red Shorthorns. Twice Milked.	1652	Sept. 14, 1919	May 27	45	—	75 12	3 0½	24.98	43.50		49.00	Fifth Prize
1313	John Wakeham	South Devon. Thrice Milked.	1603	Aug. 5, 1923	June 2	39	—	65 8	2 6	27.57	38.00		38.00	H.O.
1363	Mrs. R. M. Foot	Red Poll. Thrice Milked.	1851	Aug. 28, 1919	May 24	48	—	56 0	2 6	23.57	38.00		38.50	H.O.
1367	Sir Merrick Burrell, Bart.	White Hill Molly . . .	1854	Sept. 6, 1923	June 11	30	—	65 0	2 1½	31.04	33.60		33.50	Ratio over 30
1368	Viscount Folkestone	Longford Symphony . . .	1274	Apr. 21, 1923	Apr. 26	76	—	62 8	2 1½	29.02	33.75		37.35	H.O.
1420	Perry Dobson	Blue Alions. Twice Milked.	1523	Unknown	June 25	16	—	60 12	2 8	24.30	40.00		40.00	H.O.
1425	T. H. Swift & Sons.	Undercorn Flower . . .	1480	Unknown	June 21	20	—	61 4	1 7½	41.26	23.75		23.75	Ratio over 30
809	F. J. Mayo	Longhorn. Twice Milked.	1435	1919	June 4	37	—	46 12	2 4½	20.35	38.75		36.75	H.O.

CLASS 224A—COWS EXCEEDING 900 LB. LAYE WEIGHT

	British Friesians. Twice Milked.	Lib.	Sept. 2, 1922	Jan. 27	1923	1923	Lib. oz.	Lib. oz.	21-75	4-00	25-75	Ratio over 80
1485	The Hacho Herd	1547	Sept. 2, 1922	Jan. 27	1923	1923	1	52	88-62	21-75	4-00	Ratio over 80
1486	The Hacho Herd	1230	Sept. 15, 1922	May 9	63	June 13	2	67	8	33-00	2-30	Ratio over 80
1488	Upminster Japonica	1230	Sept. 15, 1922	May 9	63	June 13	2	67	8	33-00	2-30	Ratio over 80
1489	Trilling Lead 18th.	1617	Nov. 15, 1921	Apr. 15	87	June 13	2	69	0	32-72	4-70	H.C.
1490	Madras de Desturay	1407	Nov. 9, 1920	May 18	54	June 13	2	67	12	33-33	1-40	Ratio over 80
1491	Opaline Betty	1477	Aug. 1, 1922	June 13	28	June 13	2	69	8	32-54	29-25	Ratio over 80
1492	Chaddeley Hedge Rose 2nd	1836	Apr. 15, 1923	June 11	20	June 11	2	102	0	29-14	56-00	Second Prize
1493	Hacho Amethyst	1575	Jan. 25, 1923	June 11	30	June 11	2	79	8	36-60	34-75	Ratio over 80
1495	Greskeld Lotus	1598	Nov. 15, 1923	June 25	16	June 25	2	59	0	27-16	34-75	H.C.
1496	Guernseys. Twice Milked.	1260	July 12, 1923	Apr. 18	84	June 13	2	49	0	21-77	36-00	H.C.
1497	Woodlands Lady Wyn	938	May 9, 1921	May 23	44	June 13	1	52	4	26-45	29-25	Ratio over 80
1498	Hedham Maid	1071	Mar. 14, 1924	June 2	39	June 14	1	52	4	47-64	18-00	Ratio over 80
1499	Calchill Dewdrop	1043	May 22, 1925	Apr. 21	81	June 14	1	49	0	29-30	4-10	Ratio over 80
1500	Pottimore Giray Queen	1043	May 22, 1925	Apr. 21	81	June 14	1	49	0	29-30	4-10	Ratio over 80
1501	Guernseys. Twice Milked.	1232	Jan. 25, 1924	Dec. 29, 1927	195	Mar. 17	2	44	12	22-03	32-50	H.C.
1502	Calchill Irene	1232	Jan. 25, 1924	Dec. 29, 1927	195	Mar. 17	2	44	12	22-03	32-50	H.C.
1503	Jerseys. Twice Milked.	910	Jan. 25, 1922	Apr. 28	74	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1504	Pottmstrees	910	Jan. 25, 1922	Apr. 28	74	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1505	Doreen	906	Mar. 4, 1923	Apr. 27	75	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1506	Jerseys. Twice Milked.	959	Aug. 19, 1922	Feb. 22	136	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1507	Blue Hayes Hancock	910	Dec. 16, 1917	Apr. 24	78	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1508	Blue Hayes Sporan	910	Dec. 16, 1917	Apr. 24	78	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1509	Volunteer's Remembrance	910	Dec. 16, 1917	Apr. 24	78	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1510	Blackberry Leaf	966	Aug. 16, 1921	Feb. 2	160	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1511	Lady Iris 3rd	910	Dec. 16, 1917	Apr. 24	78	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1512	Thorn	904	Oct. 25, 1921	Jan. 25	168	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1513	Kerries. Twice Milked.	1008	Mar. 18, 1921	June 5	36	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1514	Valencia Sunflower	917	May 6, 1923	May 14	58	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1515	Hattingley Belle	917	May 6, 1923	May 14	58	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1516	Kerries. Twice Milked.	917	July 7, 1924	May 25	47	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal
1517	Hattingley Calceolaria	917	July 7, 1924	May 25	47	June 15	3	73	0	22-07	51-50	Third Prize and E.J.C.S. Silver Medal

TABLE IV.—RESULTS OF BUTTER TESTS AT NOTTINGHAM, 1928—continued.

CLASS 224B.—COWS NOT EXCEEDING 900 LB. LIVE WEIGHT.

No. in Catalogue	Exhibitor	Name of cow	Live weight	Date of birth	Date of last calf	No. of days in milk	Date of last service	Milk yield in 24 hours	Butter yield	Ratio, viz. lb. milk to lb. butter	No. of points for butter	No. of points for period of lactation	Total No. of points	Awards
1763	Sir Harold Mackintosh	Jersey, Twice Milked. Florence Twin	777	Jan. 8, 1923	May 29	43	—	46 4	2 6½	19.09	39.75	0.30	39.05	Third Prize
1778	Cordant Taylor	Nobody's Pet	805	May 16, 1922	Jan. 25	108	June 16	40 0	1 1½	20.48	31.25	4.00	35.25	R.N. and Cert. of Merit
1776	E. A. Strauss, M.P.	Jersey, Twice Milked. Kingston Bunt	847	Apr. 29, 1921	Dec. 13, 1927	206	—	51 12	2 6	21.78	38.00	12.00	50.00	Second Prize
1781	Dr. H. Watney	Thalia	826	Aug. 19, 1923	Jan. 16	177	—	45 4	2 6½	18.68	38.75	12.00	50.75	First Prize
1792	H. Cecil Pelly	Flashlight Joy	728	Feb. 24, 1925	Apr. 13	89	—	42 12	2 1½	20.41	33.50	4.00	38.40	Fourth Prize
1797	Grosvener Barry	Double Postage	735	Jan. 11, 1928	Mar. 1	132	—	32 0	1 7½	21.78	23.50	9.20	32.70	Cert. of Merit
1837	J. A. Kay	Guernsey, Twice Milked. Ravenscroft Gheraia 4th.	896	Apr. 26, 1926	June 22	19	—	25 4	1 1½	14.82	27.25	NH	27.25	—
1845	J. W. Towler	Kerries, Twice Milked. Vaddy Front 4th	826	Mar. 26, 1913	May 20	44	—	44 0	1 10½	26.31	26.75	0.40	27.15	—
1842	Mrs. Freeland	Kerries, Twice Milked. Palles Fairy	854	Feb. 18, 1918	Apr. 30	72	—	42 12	1 8½	35.07	19.50	3.20	22.70	Ratio over 80
1860	Mrs. Frank Atherton Brown	Dexters, Twice Milked. Bourton-Hill Myrtle	770	1920	May 5	67	—	46 0	2 3½	20.73	35.50	2.70	38.20	Fifth Prize
1881	H. F. Earl	Bridgemaids	791	1913	Apr. 29	73	—	44 4	1 12½	24.48	23.75	3.80	32.05	H.C.

TABLE V.—Average Results obtained from all Cows in the Butter Test Classes.

CLASS 224A.—EXCEEDING 900 lb. LIVE WEIGHT.

Breed	No. of Cows	Live Weight	Days in Milk	Milk	Butter	Butter Ratio in lb.	Points
		Lb.		Lb. oz.	Lb. oz.		
Dairy Shorthorns	5	1451	44	56 4	1 14 ⁹ / ₁₀	29.55	31.21
Lincoln Red Short-horns	3	1634	29	66 6 ³ / ₈	2 13 ⁵ / ₈	23.14	46.00
South Devon	1	1603	39	65 8	2 6	27.57	38.00
Red Polls	3	1393	51	61 2 ³ / ₈	2 3 ¹ / ₂	27.88	36.55
Blue Albions	2	1503	18	61 0	1 15 ⁷ / ₈	30.61	31.87
British Friesians	8	1479	58	65 13 ¹ / ₂	2 2 ³ / ₈	30.12	36.51
Guernseys	5	1114	89	49 2 ³ / ₈	1 12 ³ / ₈	29.46	32.68
Jerseys	8	840	108	48 5 ¹ / ₂	2 6 ³ / ₈	20.84	44.20
Kerrys	3	947	47	51 14	2 1 ¹ / ₂	24.98	34.08
Longhorn	1	1435	37	46 12	2 4 ³ / ₈	20.35	36.75

CLASS 224B.—NOT EXCEEDING 900 lb. LIVE WEIGHT.

Guernseys	1	896	19	25 4	1 11 ¹ / ₂	14.82	27.25
Jerseys	6	786	136	43 0	2 2	20.37	41.02
Kerrys	2	840	58	43 6	1 7 ¹ / ₂	24.92	30.69
Dexters	2	780	70	45 2	2 0 ³ / ₈	22.47	35.12

The Gold, Silver and Bronze Medals offered by the English Jersey Cattle Society to Jerseys only were won as below :—

Gold Medal : Dr. Herbert Watney's "Thorny."

Silver Medal : Mr. Grosvenor Berry's "Postmistress."

Bronze Medal : Dr. Herbert Watney's "Lady Ixia 3rd."

As in the Milk Yield trials, Table VI, showing the average results obtained from thrice or twice milked cattle, is given here (overleaf), which if compared with the lactation period, will explain the reasons for the holding of the two divisions.

MILK YIELD TRIALS

(GOATS, CLASSES 234 AND 235).

The number of goats competing in these Trials was 20 out of an original entry of 25. These were milked out on Tuesday, July 10, at 7 a.m., the milk for the next 24 hours being taken for the Quality Trials, with an extra milking 12 hours for the Quantity Trials. Mr. Thomas W. Palmer, the Honorary Secretary of the British Goat Society, who kindly consented at the last minute to judge all the Goat Classes, owing to the inability through indisposition of Mr. H. S. Holmes Pegler, the Judge originally appointed by the Council of the R.A.S.E. to perform this duty, superintended the whole of the work. Full particulars of the Trials are given in Table VII.

TABLE VI.—Average Results obtained from Cows milked Thrice or Twice in the 24 Hours in the Butter Test Classes.

CLASS NO. 224A.—EXCEEDING 900 LB. LIVE WEIGHT.

Breed	No. of Cows	Live Weight	Days in Milk	Milk	Butter Yield	Butter Ratio	Points
		Lb.		Lb. oz.	Lb. oz.	Lb.	
<i>Dairy Shorthorns.</i>							
Milked thrice .	3	1449	37	60 6 $\frac{3}{8}$	2 5 $\frac{1}{8}$	26.06	37.28
Milked twice .	2	1456	55	50 0	1 4 $\frac{1}{2}$	39.02	22.10
<i>Lincoln Red Shorthorns.</i>							
Milked thrice .	2	1627	21	64 12	2 12 $\frac{1}{2}$	23.28	44.50
Milked twice .	1	1652	45	75 12	3 0 $\frac{1}{2}$	24.98	49.00
<i>South Devon.</i>							
Milked thrice .	1	1603	39	65 8	2 6	27.57	38.06
<i>Red Polls.</i>							
Milked thrice .	3	1393	51	61 2 $\frac{3}{8}$	2 3 $\frac{1}{16}$	27.89	36.55
<i>Blue Abions.</i>							
Milked twice .	2	1503	18	61 0	1 15 $\frac{7}{8}$	30.61	31.87
<i>British Friesians.</i>							
Milked thrice .	8	1479	58	65 13 $\frac{1}{2}$	2 2 $\frac{3}{4}$	30.14	36.51
<i>Guernseys.</i>							
Milked thrice .	4	1085	62	50 4	1 11 $\frac{1}{2}$	29.23	29.72
Milked twice .	1	1232	195	44 12	2 0 $\frac{1}{2}$	22.03	44.50
<i>Jerseys.</i>							
Milked thrice .	2	938	74	63 10	2 9 $\frac{5}{8}$	24.45	45.07
Milked twice .	6	941	120	44 9 $\frac{1}{2}$	2 5 $\frac{7}{16}$	18.09	43.91
<i>Kerrys.</i>							
Milked thrice .	2	962	47	54 6	2 1	26.36	38.90
Milked twice .	1	917	47	47 0	2 1 $\frac{1}{4}$	22.28	34.45
<i>Longhorn.</i>							
Milked twice .	1	1435	37	46 12	2 4 $\frac{1}{2}$	20.35	36.75

CLASS 224B.—COWS NOT EXCEEDING 900 LB. LIVE WEIGHT.

<i>Guernsey.</i>							
Milked twice .	1	896	19	25 4	1 11 $\frac{1}{2}$	14.87	27.25
<i>Jerseys.</i>							
Milked thrice .	2	791	105	43 2	2 3	19.71	37.15
Milked twice .	4	759	151	42 15	2 1 $\frac{7}{16}$	20.54	42.96
<i>Kerrys.</i>							
Milked thrice .	1	826	44	40 0	1 10 $\frac{3}{4}$	26.31	27.15
Milked twice .	1	854	72	42 12	1 3 $\frac{1}{2}$	35.07	27.70
<i>Dexters.</i>							
Milked twice .	2	780	70	45 2	2 0 $\frac{1}{2}$	22.47	35.12

TABLE VII.—MILK YIELD CLASSES FOR GOATS AT NOTTINGHAM, 1928.

[illegible]

Notes.—The yield of the goat Didgimere Dogrose, No. 1084, of 18 lbs. 1 oz. in 24 hours constitutes a record for the Royal Show.

As mentioned in my Report last year, the work entailed in seeing the animals milked, and the milks weighed and sampled is heavy and continuous, as five milkings now take the place of two, necessitating very long hours, the commencement of the Trials taking place at 4.30 a.m., while the last separation is not finished until about 10 p.m.—a 17½-hour day.

To Mr. Ashton and his Assistant Stewards, the Dairymen and the Engine Men and the Dairy Machinists, I wish to tender my sincere thanks, as they relieved me of being present during the whole time the Trials were being carried on.

I would also desire to say how much I am indebted to Mr. Hasted and the staff of Dairy Maids who carried out all the practical work in the Dairy.

ERNEST MATHEWS.

Elmodesham House,
Amersham.

AGRICULTURAL EDUCATION EXHIBIT, NOTTINGHAM, 1928.

For many years the Society has concentrated the exhibits of Education Authorities in one building, which, whilst it may have the defect of limiting the scope for originality in the staging of exhibits, has many advantages from the visitors' point of view. At the Show under review the Education Pavilion was centrally placed and near the Ministry of Agriculture's exhibit; these two factors were responsible for the large number of farmers and others who visited the building and were keenly interested in the respective exhibits. Adequate and appropriate benches were provided by the Society, but the building would be improved by the provision of better ventilation. The Pavilion was in charge of Mr. William Burkitt, M.Sc.

With one or two exceptions exhibitors commendably avoided the display of too many "museum specimens," which tend to "damp" the enthusiasm of visitors; recent work demonstrated by new material—especially living animals and plants—prove of greatest interest and in consequence drive home their lesson.

There was a tendency on some of the stands to overcrowd; the temptation is undoubtedly great when abundant material has been transported for exhibition, but it is better to put the surplus under the stand than overcrowd. Again, in some cases, descriptions of exhibits were too long and detailed. A few exhibits well spaced, briefly labelled with the salient points—shorn of detail—will leave a more lasting impression than when exhibits are massed and descriptions lengthy and detailed.

MIDLAND AGRICULTURAL AND DAIRY COLLEGE.

Being the provincial College for the County in which the Show was held, a large exhibit was staged, occupying almost the whole of one side of the Pavilion. So far as was practicable the exhibits were grouped in the following six sections, each section occupying one bay :—

(1) DAIRY.—Here were staged specimens of various kinds of cheese, prominence being given to those kinds which are characteristic of the area (Leicester, Derby and Stilton), all of which are largely made within a 20-mile radius of the College. Several varieties of soft cheese were exhibited, also “potted” butter in $\frac{1}{2}$ pounds placed in a 10 per cent. solution of brine ; bread made with whey versus water showed the superiority of the former, which also gives a larger loaf. An experiment showing the actual amount of cheese produced from 10 gallons of milk of high and low fat content proved of great interest. The following yields of cheese were obtained from 10 gallons of milk in each case :—

Fat percentage . . .	0.05	1	2	3	4	5
Yield of cheese in lbs.	6	7.06	8.18	8.93	10.12	12.00

(2) AGRICULTURE.—In this section were shown :—

(a) The results of the maximum profitable manuring of potatoes, by means of pot cultures, charts and diagrams ; 10–12 cwt. per acre of a mixture of artificials plus dung giving the best returns on the College Farm.

(b) Turves grown from different seed mixtures.

(c) Plan of the College Farm.

(3) CHEMISTRY.

(a) *The Soils of Nottinghamshire*.—A series of samples of soil taken *in situ* from old grassland on the chief geological formations in the County was exhibited. These specimens showed in a striking manner variations in texture and in the accumulation of “matt.”

(b) *The Sampling of Milk*.—The importance of accurate sampling of milk on farms and in dairies was dealt with in one section of the exhibit. Diagrams were exhibited explaining the various methods in general use and the apparatus necessary was shown both in actual working size and in miniature. Other diagrams gave records of the Composition of Milk from various farms in the College area, showing the fluctuations in composition and in monetary value which may occur from time to time and from herd to herd.

(c) The composition of linseed cake and hay was shown in a very realistic manner. One pound of each foodstuff was resolved into its various components, fat, albuminoids, soluble carbohydrate, fibre, ash and moisture, each being exhibited in its actual proportion by weight,

(d) Considerable interest was shown in a sample of "Pig Feed," which, from chemical composition alone, would have been considered satisfactory, but which, on practical test, proved to be a useless mixture of various weed seeds.

(e) The deleterious effect of lime deficiency in soils was strikingly demonstrated by the growth of barley, lucerne, clover and sugar beet in lime-deficient soils and fertile soils adequately supplied with lime. In this connection a simple test for determining the lime deficiency of soils was demonstrated and particulars of the test were given on request to many inquirers.

(4) **ECONOMICS.**—In this section considerable attention was given to problems of Farm Management on the one hand and Marketing on the other. Ten charts were exhibited, seven dealing with the internal management of the farm based on costing data supplied to the Department, and three on the Marketing and financial returns obtained from celery in North Lincolnshire.

Amongst the subjects dealt with under the former head were:—

(a) **Sugar Beet Costs and Returns in Nottinghamshire for 1927.** The average results from 20 separate costs showed in one of the charts an expenditure of £20 7s. 9d. per acre. In another chart a comparison was made between the Cost and Returns of Sugar Beet and Potatoes in 1926 and 1927. Potatoes during 1927 were shown to be by far the more profitable proposition. Also based on records collected from the area a chart was shown illustrated by varying sizes of sugar beet loads on farm carts that low cost per acres does not mean low costs per ton. Five farms with an expenditure of £15 14s. 3d. per acre showed a cost of 68s. 3d. per ton, whilst five farms with an average expenditure of nearly £20 per acre only showed a cost of 47s. 8d. per ton. A similar chart for mangolds pointed the same lesson.

(b) **Milk Production Problems.**—A diagram was shown indicating the items making up the costs of producing milk in the Midland area and the importance of the herd maintenance factor in the total cost.

(c) **Labour.**—Organisation and distribution of manual labour was shown in the case of a dairy farm and in that of an arable farm.

Statistical information was shown in graphical form of the increase or decrease during the last 15 years in the main arable crops grown in Lindsey. The increase in the sugar beet acreage and the decrease in barley was particularly noticeable.

In support of the Poultry Department's work an analysis was made in diagrammatic form of the returns and expenses over six years obtained on a prosperous poultry farm in the advisory area. The returns varied a great deal, but throughout the period the farm was financially successful.

In connection with the work done on pigs at the College Farm a diagram pointed out the great changes which had taken place from year to year in the financial returns per pig sold. In the first half of 1921-22 and the last half of 1927-28 the expenses of rearing and feeding exceeded the selling price.

An investigation made into Celery Production and Marketing in Lincolnshire, during the last twelve months, provided information for the remainder of the Department's exhibit.

The movement of celery to the many markets of the country was clearly shown on a large-scale map of England and Wales. On this same map was shown by shaded lines the celery-growing areas: Cambridgeshire, Lincolnshire, Lancashire and Cheshire being by far the most important.

The financial results of celery growing was shown in diagrammatic form for over twenty farms. The returns varying from £20 to over £70 per acre. This diagram proved in many instances that high cost does not necessarily mean low profits.

(5) PLANT DISEASES AND INSECT PESTS.—In this section there were shown :—

(a) *Celery Diseases and their Control*.—Two miniature frames, one with healthy and the other with "damped-off" celery seedlings, illustrating the control of seedling diseases in frames. Celery seed, badly infected with the Blight fungus, shown under microscope. Specimens and photographs of the Phoma Root Rot disease. A range of photographs illustrating how effective control of the serious "Blight Disease" of celery can be accomplished by spraying, and a chart showing the results obtained by spraying in 1926, when an increase in value of the celery crop of £45 per acre was obtained by regular spraying in the field.

(b) *Rook Survey and Census in Notts, Leicestershire and Rutland*.—Large maps of these counties with flags showing the position of all the rookeries. Preliminary observations to find out whether rooks are harmful or otherwise to the farmer.

(c) *Sugar Beet*.—Specimens and photographs of the various sugar beet diseases and pests that have been found in the East Midland area.

(6) POULTRY AND HORTICULTURE.—This combined exhibit occupied one bay. In the poultry section there were shown :—

(a) Specimens and cost of food consumed by a hen kept for breeding purposes for one year.

(b) Rhode Island Red cockerel and light Sussex hen with progeny one day, three weeks and seven weeks old respectively, illustrating sex linkage.

(c) Suitable eggs for hatching and samples showing how to grade edible eggs for the market.

(d) Specimens of trussed cockerels ready for cooking.

And in horticulture :—

- (a) Specimens of soft fruits.
- (b) Model of a garden with poultry.
- (c) Specimens illustrating chrysanthemum and carnation culture.
- (d) Plan of College orchard and plan showing four-crop rotation for an allotment.

NATIONAL INSTITUTE OF AGRICULTURAL BOTANY.

This Institute staged a comprehensive exhibit which clearly demonstrated the activities of the Institute on behalf of farmers and others, and the lessons to be learnt therefrom.

The Crop Improvement Branch exhibit included principally the following :—

(a) A large model illustrating the way in which one of the Institute's cereal trials is laid out, drilled and harvested on the drill strip system. This model also showed how each variety and its control strip are distinguished and kept separate at harvest time.

(b) The yield results of winter wheats and spring barleys obtained during the last three years at six different centres were graphically shown by means of vertical glass cylinders containing columns of grain which varied in length with their respective yields.

(c) Specimen sheaves—of both green and dried material—of the same varieties of wheats and barleys, and also grain of the same were exhibited.

(d) Potato plants showing healthy specimens side by side with other plants infected with mosaic disease.

The Seed Testing section demonstrated the processes involved in seed analysis and emphasised the value of seed testing to the seedsman and the farmer. There were displayed :—

(a) *Working Exhibit.*—Three analysts demonstrated the various processes involved in the determination of percentage purity and the methods employed to ascertain percentage germination of samples of agricultural seeds. Apparatus used at the O.S.T.S. was displayed and its uses explained. A Senior Officer of the Station was in attendance to explain agricultural application of seed testing, answer inquiries, etc.

(b) *Samples of Agricultural Seeds.*—(1) To demonstrate the difference in general appearance between average samples of high and low purity and germination of each of the agricultural seeds scheduled in the Seeds Regulations. (Germinating seed of each was shown in conjunction with above.) (2) "Deceptive" samples—to show that often the value of seed samples cannot be even approximately determined without the aid of germination tests.

(c) *Photographs*.—(1) Of the O.S.T.S. laboratories; (2) to illustrate work of O.S.T.S.; (3) of seeds of scheduled injurious weeds and other commonly occurring weed seeds.

(d) Mounted plant specimens of scheduled injurious weeds.

(e) Mounted specimens of certain seed-borne plant diseases.

(f) Collections of weed seeds commonly occurring in seed samples.

(g) Diagrams, etc., to illustrate value of seed testing.

ROTHAMSTED EXPERIMENTAL STATION.

This stand demonstrated some of the more important results obtained at the Station with the manuring of crops, grouped as follows :—

(a) *Crop Yields*.—Two exhibits were arranged in this section, namely, (1) Malting Barley, (2) Potatoes.

Malting Barley.—This exhibit consisted of samples of malting barley grown with and without nitrogen, the yield per acre in each case being represented by small sacks. The valuation of the barleys was given in each case, and the point was brought out that whereas 1 cwt. of sulphate of ammonia per acre increased the yield, the quality was not lowered, but remained the same. Examples of this were shown both from very good barley lands and poorer lands, and although the increase with nitrogen (1 sack per acre) in the case of the poorer land was not so high, once more the quality was not lowered.

Potatoes.—The connection between the yield of potatoes and increasing doses of nitrogen and potash in the presence of constant phosphate was shown by means of a three-dimensional model.

Inoculation of Lucerne.—An exhibit showed the method of inoculating lucerne seed so that the bacteria necessary for its successful growth could be introduced into the soil. Maps showing the natural lucerne-growing area of England and also places where lucerne had been grown by inoculating the seed were also exhibited.

Fertilisers.—Basic Slags: The residual effects of slags of variable solubility was demonstrated by means of barley growing in pots. This barley was the second year crop, the slags having been given to the first crop. Slags about 60 per cent. solubility again proved almost equal to those of 90 per cent. and 95 per cent.

Calcium Cyanamide.—The effects of applying calcium cyanamide at different dates before sowing, and at sowing, was shown by means of turnip plants, growing in four compartments. The cyanamide having put on as follows, Nil, one week before sowing, two weeks before, and at sowing. All seeds were sown on the same day. The results distinctly proved the manufac-

turer's advice, in that cyanamide must be sown at least 10 to 14 days before sowing of seeds.

Photos illustrating the biological control, *e.g.* Gorse in New Zealand, by means of insects, and also of the damage done to wheat and meadow foxtail and osiers by midges, completed the total exhibit.

NOTTS EDUCATION COMMITTEE.

The object of the Committee's exhibit was, as far as possible, to demonstrate the various activities carried out by their staff in the County. The Departments represented were as follows:—

Agriculture, which included the feeding and management of livestock, manuring and management of grassland, and the manuring of sugar beet.

The Horticultural section demonstrated the results of field trials, certain diseases of fruit and their remedy, and included a Fruit Bottling section showing examples of work done by students at classes.

The Dairying section included specimen cheeses and butter as made by students at the Travelling Dairy School; and the Poultry section demonstrated methods of egg grading and points relating to correct management.

The Manual Instruction section had photographs illustrating work done by students in the various branches, and in the Veterinary Science section specimens of diseases of farm stock were exhibited.

Charts and illustrations giving results of County experimental work and an excellent series of turves formed an important part; these elicited numerous questions and opened the ground for discussion.

The exhibit was carefully labelled so that each section was self-explanatory. The decoration was carried out in a red and white colour scheme, which had the effect of "throwing out" the staged exhibits.

AGRICULTURAL ECONOMICS RESEARCH INSTITUTE.

This Exhibit was primarily designed to show by a few examples the practical application of costings to the producer, and, by means of a map, the State Services which exist for his advice and assistance in costings, accounts and economic problems in general. Some specimen costs were exhibited, which served as comparisons between individual accounts and promoted discussion on local problems and variations.

Special inquiries and surveys which the Institute carries out periodically were illustrated by two recent pieces of work, an inquiry into the costs and incidence of the sugar beet crop on a national basis and a survey of Milk Production and Distribu-

tion in the counties of Wiltshire and Somerset. The former was illustrated by a series of charts showing the problems which confront the grower, such as early sowing, singling and manuring, and also by charts illustrating the effect of prices on the area under cultivation and the relative number of producers classified by the weight of produce per acre, showing their gross and net returns. The Milk Survey consisted of a series of diagrams on an enlarged scale, illustrating the complexity of the wholesaling services in the country under observation and the overlapping of retail distribution services which exists in any large town—Bristol being in this case the example. Interesting figures were exhibited of the proportions in which milk is used for liquid consumption, butter, cheese, manufacture and stock rearing in the locality.

A further exhibit which attracted much attention was a machine for the rapid grading of eggs by weight. The machine consisted of a series of tracks down which the eggs rolled with perfect safety. At various points there were "traps" which tipped at certain weights, the eggs falling into trays below. The traps could be adjusted to work very accurately and the machine graded in one-fifths of an ounce. It was capable of working at a good speed and breakages and involuntary stops were reduced to a minimum.

NORTHAMPTONSHIRE FARM INSTITUTE.

This Exhibit included:—

(1) *Farm Institute.*

Photographs illustrating methods employed in the teaching of students attending short courses, with special reference to practical instruction in the principles of stock feeding and management, the cultivation and manuring of crops, dairying, poultry-keeping, fruit-growing and farm book-keeping. Some practical results of the instruction.

(2) *Experimental Farm.*

Illustrations of results obtained in the breeding and rearing of live stock to suit local market requirements. Methods employed in the feeding and management of the farm animals. Illustrations of the improvement of grass land. Some results of investigations in sugar-beet growing.

(3) *Poultry-keeping and Dairying.*

Methods practised in the commercial management of poultry on the Institute Farm. Illustrations of county work for the improvement of poultry and poultry-keeping. Grade "A" T.T. Milk production on the Institute Farm. Utilisation of surplus milk by manufacture and for stock feeding. County work for Clean Milk production.

(4) Fruit-growing and Horticulture.

Branches in fruit of commercial varieties of black currants showing differences in type, resistance to pests, and variation in damage by frost. Plants showing method of propagation. Baskets of gooseberries and punnets of strawberries from the Institute Fruit Plantation. Specimens illustrating methods of controlling pests and diseases. Flowers of annuals grown between rows of fruit on the Institute Plantation.

THOS. MILBURN.

THE FORESTRY EXHIBITION AT THE NOTTINGHAM SHOW, 1928.

ALL the space allotted to the Forestry Section at the Nottingham Show was occupied, and had the area been doubled there would have been no difficulty in filling it. Evidently the public is showing an increased interest in everything to do with Forestry, and the time appears to have arrived when the space set apart for this section at the Royal Show might well be augmented.

The number of exhibits this year was 98 as against 85 at Newport. In addition there were some exhibits that did not appear in the catalogue, a noteworthy example being a bay containing a most interesting exhibit from the Chatsworth Estate, one that would undoubtedly have been awarded the Special Medal, had it been correctly entered.¹

Considering that the Show this year was in the neighbourhood of Sherwood Forest, it might well have been expected that more landowners would have competed. Perhaps many of those who could have exhibited felt that they had no chance when competing against large estates in the neighbourhood such as Welbeck and Clumber.

In spite of the large entry, when the Show opened everything was completed and staged in a manner that reflects great credit on Professor William Dawson and his able assistant, Mr. Wisdom. The regretted absence of the senior Steward, Mr. C. Coltman-Rogers, through illness, was a serious handicap, as visitors to the Forestry exhibition are invariably seeking information, and Mr. Dawson had as much as he could well do to satisfy everybody.

There were 38 competitive exhibits and 60 non-competitive, the latter divided into (a) Public Institutions, 13; (b) Estate and Private enterprise, 19; and (c) Purely commercial, 28.

¹ The Council of the Society, on the recommendation of the Botanical and Zoological Committee, subsequently decided to award the Special Medal to this exhibit.

CLASS 1. *Specimen boards of Oak, Elm, Ash and Beech.*

There were only four exhibits in this class and the Silver Medal was awarded to Captain E. W. S. Foljambe, of Osberton, Worksop, rather on account of the quality of the timber than the size of the boards. Lord Savile, K.C.V.O., of Rufford Abbey, who showed a beautiful ash plank, obtained the Bronze Medal.

CLASS 2. *Specimen boards of Larch, Spruce and Scots Pine.*

The same four entrants competed, but only the Silver Medal was awarded, and that to Lord Savile.

CLASS 3. *Specimens of any other sort of Hard Wood.*

The Silver Medal was awarded to the Executors of the late Duke of Newcastle, who showed four good boards, *Quercus Sessiliflora*, *Ulmus Montana*, Spanish Chestnut and Sycamore. Captain Foljambe obtained the Bronze Medal with boards of *Cedrus Deodora* and Spanish Chestnut.

CLASSES 4 and 5. There were no exhibits.

There were no less than twenty entries for gates and wickets, and the judging was difficult. These entries are always eagerly and critically scanned by the public, who generally disagree with the award of the judge. It must, however, be remembered that a good gate may be disqualified if the estimate of cost is too low, and such points as these are overlooked by the "man in the street."

Though the gates were quite up to the average, there was not a really perfect gate in the Show. Small defects such as the use of iron nails in oak gates, causing stains, as against galvanised iron spikes—no means of adjusting the "drop" of the gate—top bar not tapered, or having a knot in it—expensive bolts and nuts where ordinary clinched nails would serve—too expensive iron-work, &c., &c., were in evidence.

CLASS 6. *Oak Field Gate for Farm Use.*

The Executors of the late Duke of Newcastle were awarded the Silver Medal, the Bronze Medal going to the Welbeck Estates Co., Ltd., whilst a gate of the Belvoir Estates, Ltd., was highly commended.

CLASS 7. *Field Gate for Farm Use.*

Chatsworth Estates Co. obtained the Silver Medal; Captain E. W. S. Foljambe the Bronze Medal, and the Welbeck Estates Co., Ltd., were highly commended.

CLASS 8. *Field Gate of rent or cleft timber, cost not to exceed 25s.*

There was no entry for this class, probably because the price is too low to-day.

CLASS 9. *Wicket or Hunting Gate (self-closing).*

There were six entries for this class, and the Silver Medal

was awarded to Lord Savile, the Bronze to the Belvoir Estates, Ltd., while the Chatsworth Estates Co., Hardwick, was highly commended.

CLASS 10. *Tree Guard.*

There were only three entries, and some ingenuity was shown to comply with the conditions. Silver Medal, Chatsworth Estates Co., Chatsworth; Bronze Medal, Lord Savile, Rufford Abbey.

CLASS 11. *Fencing of Home-grown Timber.*

Lord Savile's exhibit was of outstanding merit, the fence made of larch thinnings being especially interesting and gained the Silver Medal. Welbeck Estates Co., Ltd., were awarded the Bronze Medal.

CLASS 12. *Fencing of Foreign Timber, creosoted or otherwise.*

There was no entry for this class.

CLASS 13. *Nurserymen's Competition. Specimen and ornamental trees.*

There was only one exhibit, that of Messrs. William Barron & Son, Ltd. It was a well-laid-out exhibit of fine specimens, and quite an education in itself. It was awarded a silver medal.

Non-Competitive Exhibits.

There were a large number of these and of the highest interest.

The Forestry Commission occupied 500 square feet, and their exhibit at the Royal is always looked forward to. The fighting of forest fires was shown in great detail, also an exhibit of injurious and beneficial birds and animals. A sample set of the largest trees as grown to date by the Commission was shown, but we expect that these will soon be too big to exhibit in a tent.

The Leicester City Museum and Art Gallery had a very fine stand of great interest to the forester, and not unduly crowded. The collection of wax models giving floral and other details of British trees, was quite unique and very life-like. The Special Medal was awarded to this interesting exhibit.

Messrs. Bryant & May, Ltd., had an instructive stall, entirely devoted to the aspen and match manufacture. This Company was awarded the Silver Medal, whilst the bronze medal went to the *Earl of Leicester*, of Holkham, Norfolk, for a collection of useful articles manufactured from evergreen oak (*Quercus Ilex*).

In the purely commercial section, the Silver Medal was awarded to *Messrs. Oates, Ltd.*, of Worksop, for their exhibit of all classes of handles for agricultural and domestic purposes, mostly made of English ash. They also showed some stools made from burr elm and oak, with turned legs of yew, that were very interesting.

Two bronze medals were awarded in this section, one to the *Colesborne Estate Timber Yard*, Colesborne, near Cheltenham, for pig and poultry houses, coops, gates, tennis-racket sticks, etc.; whilst the other medal went to *Rural Industries*, Charlton Kings, Cheltenham, for exhibits in wattle, osier, hazel and interlace fencing.

Messrs. William Lowe & Sons, of Beeston, Notts, showed a collection of trees and shrubs, very tastefully laid out on the edge of the lake, whilst the following also had exhibits: *Belvoir Estates, Ltd.* (panelling); *Captain Foljambe* (cupboard); *Executors of the late Duke of Newcastle* (specimens of timber); *The English Forestry Association, Ltd.*, Caversham, Reading (forest trees and tools); *William Barron & Son, Ltd.*, Beeston (transplanting machine); *The T. L. Smith Co.*, London (Teles power-driven saw); *Canadian Importers, Ltd.*, Avonmouth (Witte log and tree saw); *Messrs. Christy & Penny, Ltd.* (the Wade cross-cut saw).

Cambridge University had a most interesting stall, to which more space should have been allotted. Here could be seen samples of all the timbers of the Empire, as well as those grown in the British Islands. Examples of pests and diseases, microscopic slides of timber sections, and many other interesting exhibits were here on show.

The Earl of Yarborough's well-known collection of boards were also on show, though not entered in the catalogue. *Mrs. Havelock* showed an interesting round table formed of inlays of innumerable different samples of wood.

Altogether the Forestry Exhibition of the 1928 Royal Show was of outstanding merit, and was evidently greatly appreciated by the public.

GERARD F. T. LEATHER.

Middleton Hall,
Belford.

REPORT OF THE JUDGES ON THE PLANTATIONS AND NURSERIES COMPETITION, 1928.

THE counties included in the competition for 1928 were Norfolk, Suffolk, Essex and Cambridge. The area is one of the least well-wooded districts in England, but nevertheless, the number of entries was considerable—15 different estates having entered with 42 separate entries. In spite of the sparsely wooded character of the country, a number of very interesting plantations were examined. The owners frankly acknowledged that they did not want medals, but they wanted the advice of

the judges on their woodlands as they were, and advice as to future management. The country in question is to a large extent game country, but as is shown in quite a number of places examined, sound silviculture was combined with the sport—one might almost call it industry—of East Anglia. The district is almost sea-level throughout, and while the soils vary from part to part, the chief incentive to the estate owners is to manipulate his woods in such a way as to make the best of his game. This is a point which is so often forgotten in English forestry. The area included in the competition embraced land from clay to sand and rich loam, and in the opinion of the judges, in each case the correct kind of tree was being grown, and it was also evident that on all the estates there was much room for extension of the forest area.

In practically all cases the owners were present, and the judges discussed with them on the ground the condition of their woodlands, and the possibility of their improvement. As is usual in the Plantations Competition, the agents, their foresters and the owners put themselves out to a considerable extent in order to be present at the judging. In all cases there was a frank and free discussion as to the best management, and as to what steps should be taken to bring the woods to maturity.

Unexpected discoveries were made in the application of sound silvicultural principles, applied under difficult conditions, which are seldom found in England, especially in the present European idea of natural regeneration, which has for so long been advocated but not practised. A special instance of this may be cited in the case of an Estate entered from Blickling Estate Office which is known as Stody Hall, where the land-steward (Mr. Butler) has for years past been preserving such natural groups as appeared, and has in particular a big wood now well in hand to re-establishment at no cost greater than that of temporary fences to keep out the rabbits.

Some of the estates combined the æsthetic side in rather too high a degree with the utilitarian, but in no instance could exception be taken to the system of management, and it was most gratifying to the judges to find that the owners had not only their personal interests at heart, but at the same time had the national timber production point in the foreground.

The judges are convinced that the competition held by the Society is of the first importance as regards the development of forestry on private estates in this country, as the owners know there is no ulterior motive, and the Society merely wants to help the landowners, and in this connection we should say that each individual estate is this year for the first time being sent a private note on their woodlands, embracing the criticisms which were expressed to the owners on the ground, and also containing what

the judges consider to be correct advice on future management. It may be of interest to the Society to know that considerable correspondence has already arisen following the visits of the judges, and members who were rather apathetic to forestry before, are now quite keen, and the judges wish to state that in their opinion, the Society's competitions are stimulating forestry on private estates in a way that no Government department is doing. Also the judges did not confine themselves exclusively to the plantations entered, but where they were asked, they visited other plantations, and in some cases advised on the whole estate. A point of special interest to the judges was the fact that so many owners are now taking a personal interest in the management of their woodlands.

The itinerary started from Cambridge, and the first estate visited was that of Mr. R. S. Hicks at Wilbraham Temple. This estate is not large, but the owner is his own forester, and he showed how it is possible to manipulate comparatively small woods so that the most can be made of them. The soil on his property is difficult, and the possibilities of tree growing are limited, and with a low rainfall and shallow soil, it is not easy to produce timber at a profit, but the enterprise and forethought of the owner has evidently been successful. The work begun by Mr. Hicks leaves much room for future experiment, and his success may be of value for other planters of this type of land. The Silver Medal for the best managed estate was awarded to Mr. Hicks.

The next plantation visited was that at Highfield, near Bury St. Edmunds, belonging to Major Barclay. This area was of very great historic interest, but owing to the large competition in the same class, it could not be given any special award. This woodland is in the condition of so many English woodlands—it has outlasted its time. In it are a large number of trees of excellent quality, but a considerable part of the ground is now covered with coppice of an inferior variety, and the question now is how to regenerate it so that it may carry on the character that it has had for the last hundred years. The owner was advised to encourage Ash in all open spaces, and if possible to plant it so that the woodland would still remain as "coppice with standard" which has been characteristic of the English woodlands since the time of the Normans.

The judges next visited the Thorndon estate under the control of Lord Petre's Trustees at Ingatestone in Essex. On this property, the Agent, who has got a sympathetic leaning towards forestry, is making every effort to utilise the waste land, and considerable areas have been planted outside the plantation which was entered for competition. The land he has to deal with is difficult, and the situation requires also special

consideration from the landscape point of view. It was impossible to make an absolute clear felling of the district as the woodlands adjoin the main drive to the house. The judges were of opinion that what has been done so far was best under the circumstances.

The well-known estate of Captain E. G. Pretyman at Orwell Park, showed a clear case where the owner was doing his utmost to bring his woodlands into a full-bearing condition. In the case of his nursery, the judges were of opinion that it could not be considered for competition as it was more than 50 per cent. ornamental planting, and the remaining comparatively small part only was for forest trees. They have, however, to state that they considered it extremely well-kept, and for the purposes for which it was used, economical and efficient. The plantations showed the fault which is mentioned later, viz. they had not been thinned in time, and they suffered from the difficulty of being too closely grown. The owner agreed with this criticism, and as is correct, brought forward the statement that immature thinnings could not be used. The judges, however, consider that cost of thinnings should be sacrificed in favour of future values.

The property of Mr. Charles Eley at East Bergholt is well known to all lovers of trees and shrubs, and in the immediate demesne there is an infinite variety of the trees and shrubs that grow in England. The judges did not take that part into consideration, but their awards were made on the management of the outside parts of the woodlands, where efforts were being made to bring them into proper silvicultural condition. The feature which pleased the judges was the fact that natural regeneration was being encouraged throughout the woodlands. In this case particularly, the owner has been in touch with the judges regarding advice for future management of his woodlands.

Mr. J. K. Brooke's estate at Sibton Park, Yoxford, showed another example of how the owner was taking a personal interest in his woodlands. Three different sections were examined, and all showed an endeavour to bring the last-century woodlands into proper present-day management. The difficulty in the property was the excess of young coppice, but this, too, had been handled intelligently. The thinnings of the middle-aged woodlands had been particularly well done, but as the entries in this class were very large, it was impossible to give a special award. The game interest was predominant on this property, and in the opinion of the judges, it was very well done.

Lord Somerleyton's nursery at Somerleyton Park was awarded the Bronze Medal, and showed the purely practical enterprise of rearing the biggest quantity of plants in the minimum of space. The plantations here again had fulfilled the game interest as

well as the production of timber, and the two points of view were combined in a very practical form. The reproduction of certain areas on the property had been undertaken and carried out on good silvicultural lines, and the recent planting is likely to lead to good results. On this estate the judges were of opinion and suggest that the young trees might be reared from seed instead of from seedlings brought in from nurserymen. This is, however, a controversial point, and it may be that the estate method is the best under the conditions of labour prevailing.

The estate of Colonel Petre at Westwick was a very pleasant part of the itinerary. The woodlands there have been managed in a scientific manner for so long that it was well known to the judges before they arrived. Colonel Petre accompanied them throughout the visit, and they found evidences of good management for a long period of years beforehand. Certain plantations, particularly those of Douglas Fir, which had to be neglected during the war, had evidently been brought into form in a way which reflects great credit on the owner, who is his own forester. He had planted Douglas Fir in a way which has since proved to be wrong, but his management of the woods has now brought them into a condition which makes them among the best managed Douglas Fir plantations in this country. The Perch Lake plantations was awarded the Gold Medal of the Royal Arboricultural Society. The various plantations on Colonel Petre's estate warrant a longer description, but as they are so well known in his own county, it is not necessary for us to say more about them now.

Mention has already been made of the Stody Hall Estate belonging to the Marquis of Lothian. The land-steward (Mr. Butler) had taken a particular interest and pride in the Big Wood adjoining the house, and had by his intelligent management started a system by which the woodlands can be regenerated without total clearing. This woodland showed the most studied management, and the estate itself was awarded the Gold Medal. Mr. Butler, although not by profession a forester, has evidently that outlook which is required for sustained forest management. Blickling is a good example of an estate where a non-resident owner's interests are considered in a very marked degree.

The woodlands of Lord Hastings' estate at Melton Constable showed considerable diversity as regards the contents, and also methods of management. Some of the woods which had been planted from 25 to 30 years ago were not good, and others that had been recently thinned and handled properly were excellent, and showed evidences of continual and not spasmodic care. The owner has a special desire to grow Oak, but the judges considered, in the places where the Oak was planted, that the conditions were not suitable, and that they were already doomed, and that

the ground would have to be given over to Chestnut and Ash. This was particularly the case in section B of Holmes Wood. The crop still in the ground is of such a condition that a mature and profitable crop can be reared of the species mentioned. In the Swanton Road wood planting had taken place with spacing of 6×4 in one and 4×4 in the other. The condition of the wider planting with judicious pruning was clearly demonstrated in this wood, and there was no difficulty whatever in awarding it the Silver Medal in its class. Ash flourishes in many parts of the estate, and this should be encouraged more than the Oaks. Ash is a quick-growing tree and is characteristic of the districts as well as the Oaks. The latter require much too long a period to come to maturity, and although the estate is famous for its Oaks, there is no reason why large areas of good land should be covered with a slow-growing tree. The well-known Hindolvestone wood is about as good an example as can be found of the early and medieval type of woodland known as "coppice with standard." It is, however, past its best, and the increment does not repay its owner for allowing it to stand as it is. In spite of this fact, the judges had to give it a special award, as the management for a woodland of its kind was excellent.

Sir Richard Bagge of Gaywood Hall entered three plantations in the same class, viz. Class 3, in which so many entries were made. All three plantations had been correctly planted, and were in good condition, and the only advice to be offered was that all double leaders should be corrected. The plantations are extremely promising, and as they grow upon the thinnest of sand land, they again are a demonstration of what can be done by judicious selection of the correct species for the particular soil. These plantations give great promise and they reflect credit on the planters. They are not yet at an age or size when thinnings can be carried out, but the owner has been advised not to postpone the time of thinning too long. There is a considerable danger of fire on the dry sandy land adjoining the railway, but the estate has taken steps to minimise this.

Lord Leicester entered his nursery only. This area is situated in an extremely exposed part of the Norfolk coast, and in the general lay-out every effort has been made to protect the young plants against sea winds. That this has been successful, is shown by the fact that this nursery contains probably more species than are found in any private nursery in England, and although the æsthetic side is taken into account to a very large extent, the utilitarian side was in the foreground. The nursery was awarded the Silver Medal.

Three entries were made on the Sandringham Estate. Unfortunately these all again fell in Class 3, in which the competition was so keen. The plantations were thriving, and in

most cases were in good condition. It was suggested that all the plantations might with advantage be thinned, as the trees were now in the condition to show which would ultimately be the dominant species. In one or two places, particularly in the Bomb Plantation, where the woodland was rather thin, it was considered that Douglas Fir be planted to give ground cover. In most of the wood the Larch will in time be eliminated, and the predominant tree will be Scots Pine. It was also suggested that wherever possible, hard woods should be introduced on account of the light quality of the soil, and even such trees as Mountain Ash, Gean, Birch and Sycamore will help to close the woods and to improve the soil.

On Sir Hugh Beevor's estate at Hargham, there was one entry in Class 8. In this plantation some very interesting forestry was seen. Japanese Ash and European Ash were grown on the same plantations on separate areas, and a very interesting comparison could be seen as to the relative rates of growth of the two species on the same type of ground. The Japanese Ash had been grown more closely than accords with present-day ideas, but the woodland had been thinned until the trees stood in lines about 8-9 ft. apart, and they had an average of 8 in. quarter girth and 38 ft. height. The trees were more straight than is usual with Japanese Larch, in fact what is considered the typically correct stem was rare, and the judges were of opinion that the wood could with advantage be thinned, as there was a superabundance of raw humus on the ground, and also that the trees were now showing too small tops. If they are allowed to continue in their present condition it will lead to loss of increment. The plantation, however, was so good that the judges had no hesitation in awarding it a Bronze Medal.

On Lord Fisher's estate at Kilverstone interesting plantations were seen. The estate is situated in the best type of game country, and the woodlands were maintained with this point of view frankly in the foreground. At the same time, however, the question of timber production was never lost sight of, and some of the older woods are in really good condition. The woodlands are all similar in character, mainly coniferous, but an effort was being made in all cases to maintain 20-25 per cent. of Beech. Another extremely interesting point in connection with the plantation which was entered, and in fact in all the plantations on the estate, was the production of Spruce for Christmas trees. This was not fortuitous, but was the deliberate policy of the owner. This brought in a considerable intermediate revenue, and also kept the wood in good condition for game. It was the best example the judges saw of the combination of timber production with game interests.

To sum up, the judges ask to be allowed to offer a criticism

of the woodlands as a whole. The outstanding mistake that had been made throughout was the postponement of thinnings until too late. This resulted in trees having long bare stems with too small tops. Owners should realise that there is a direct relationship between the size of the top and the roots of the tree. The consequence of keeping them in this condition too long was that the woodlands were liable to be bent in even moderate gales. Another evil resulting from the too small tops is the fact that increment is lost, as the trees do not have sufficient green top to nourish the stem and produce merchantable timber in a reasonable time. The tall thin stem does not pay so well as that which is shorter and which has a greater diameter.

The judges wish to express their gratitude to the various owners, their agents and foresters for the courtesy shown to them throughout, and it has to be acknowledged that the owners often accommodated their time to that of the judges at great personal inconvenience.

The complete awards are appended.

PLANTATIONS COMPETITION.

I.—HARDWOODS.

As final crop. To be not less than four acres in extent.

CLASS 1.—Plantations from four to twenty years of age. No award.

CLASS 2.—Plantations over twenty years of age.

First Prize (Silver Medal)—Charles Cuthbert Eley (*Smart's Plantation*).

Second Prize (Bronze Medal)—Lieut.-Col. B. J. Petre (*The Grove*).

II.—CONIFERS.

To be not less than four acres in extent, and may originally have been planted with not more than 25 per cent. of Hardwoods.

CLASS 3.—Plantations from four to twenty years of age.

First Prize (Silver Medal)—Lord Hastings (*Swanton Wood*).

Second Prize (Bronze Medal)—Charles Cuthbert Eley (*Straight Road*).

CLASS 4.—Plantations over twenty years of age.

First Prize (Silver Medal)—Lord Hastings (*Holmes Wood*).

Second Prize (Bronze Medal)—The Right Hon. E. G. Pretyma (*Brightwell*).

III.—MIXED PLANTATIONS OF HARDWOODS AND CONIFERS.

To be not less than four acres in extent.

CLASS 5.—Plantations from four to twenty years of age.

First Prize (Silver Medal)—Lord Fisher (*Dreadnought*).

CLASS 6.—Plantations over twenty years of age.

No award.

CLASS 7.—For the best managed coppice of any species.

First Prize (Silver Medal)—Lord Hastings (*Hindolvestone*).

Second Prize (Bronze Medal)—The Right Hon. E. G. Pretyma (*Foxhall Plantation*).

CLASS 8.—Plantations of not less than one acre, consisting of Douglas Fir, Sitka Spruce, Japanese Larch, Corsican Pine, or any other rarer conifer, planted not less than five years.

First Prize (Silver Medal)—Lieut.-Col. B. J. Petre (Perch Lake Wood).

Second Prize (Bronze Medal)—Sir Hugh R. Beevor, Bart. (Hargham).

CLASS 9.—For the best managed Woodlands on an estate of not less than 1,000 acres in area, the Judges to take into account examples of systematic management of woodlands for the production of timber, ornamental planting, planting for sporting purposes, and improvement of residential amenities and proper management of hedgerow timber.

First Prize (Special Medal)—The Marquis of Lothian.

Second Prize (Silver Medal)—Reginald Stanley Hicks.

Third Prize (Bronze Medal)—Charles Cuthbert Eley.

Royal English Aboricultural Society's Gold Medal for the best Plantation
—Lieut.-Col. B. J. Petre (Perch Lake Plantation).

NURSERIES COMPETITION.

BEST MANAGED GENERAL ESTATE NURSERY.

First Prize (Silver Medal)—Earl of Leicester, K.C.V.O., C.M.G.

Second Prize (Bronze Medal)—Lord Somerleyton, G.C.V.O.

WILLIAM DAWSON.

A. E. WILSON.

REPORT OF THE JUDGES ON THE ORCHARDS AND FRUIT PLANTATIONS COMPETITIONS, 1928.

(Restricted to the Counties of Dorset, Wiltshire, Hampshire and the Isle of Wight.)

CLASSES :

1. For the best managed orchard or orchards of fruit trees of not less than eight years' growth on cultivated ground, being not less than 1 acre and not more than 3 acres.
2. For the best managed orchard or orchards of fruit trees of not less than eight years' growth on cultivated or uncultivated ground, being over 3 acres.

(In Class 2, in cases of plantations of 6 acres or over, at least 50 per cent. of the total acreage on the holding had to be shown to the Judges.)

In the above classes trees may include all or any of the following varieties : Apples, Pears, Plums, Damsons, Cherries. In Classes 1 and 2, trees may be of any height.

3. For the best managed plantation of bush fruit of not less than four years' growth, being not less than 1 acre or more than 3 acres.

4. For the best managed plantation of bush fruit of not less than four years' growth, being over 3 acres.

In Classes 3 and 4, young trees or a temporary crop planted between the bushes did not disqualify, but the bush fruit only was considered.

(Bush fruit may include all or any of the following kinds : Black Currants, Red Currants, Gooseberries, Raspberries, Loganberries.)

5. For the best managed orchard or orchards of fruit trees planted since November, 1919, being not less than 2 acres.

6. For the best managed plantation of Strawberries of any age, being not less than 1 acre or more than 3 acres.

7. For the best managed plantation of Strawberries of any age, being over 3 acres.

(In Classes 6 and 7, not more than 50 per cent. may have been planted since June 1, 1927.)

8. For the best managed plantation of Strawberries of not less than 1 acre, planted since June 1, 1927.

(If there were more than 2 acres of Strawberries on the holding, at least 50 per cent. of the total acreage had to be shown to the Judges.)

The Royal Agricultural Society of England gave their Special Medal for the entry which received the highest number of points in any one of the classes.

Judging commenced in Hampshire on June 4, and terminated in the same county on June 9. The weather was mostly fine, and the itinerary planned by Mr. E. C. Boughton, Secretary of the Fruit and Vegetables Committee of the National Farmers' Union, worked very well.

The entries numbered 33, viz. :—

Class 1	.	.	.	.	.	.	.	2	entries.
" 2	.	.	.	.	.	.	.	5	"
" 3	.	.	.	.	.	.	.	4	"
" 4	.	.	.	.	.	.	.	5	"
" 5	.	.	.	.	.	.	.	6	"
" 6	.	.	.	.	.	.	.	5	"
" 7	.	.	.	.	.	.	.	3	"
" 8	.	.	.	.	.	.	.	3	"

Of these there were 23 entries from Hampshire, 6 from Wiltshire, 4 from the Isle of Wight, and none from Dorset.

In view of the special interest in the strawberry classes, particularly in Hampshire, we adopted a different method of scoring in these classes, while maintaining the same method as formerly in the other classes. The two score cards were as follows :—

	Strawberry Classes.	Other Classes.
(a) System of planting	10	15
(b) Pruning and shape	—	10
(c) General vigour and productiveness	15	15
(d) Freedom from pests and disease	—	15
" " small plants, pests, etc.	25	—
(e) Land cultivation, having regard to the profitable use of the ground	—	15
Freedom from weeds, hoe damage and bad planting	15	—
(f) Selection of varieties	5	5
(g) Economical and commercial aspect	—	15
Freedom from rogues	10	—
(h) General appearance	15	5
(i) Fencing and protection	—	5
Strawing	5	—
	<u>100</u>	<u>100</u>

In making the following awards, we were in full agreement as to the winning exhibits.

CLASS 1.

Second: Mr. S. E. Saunders, Padmore, Whippingham, Isle of Wight.

A very good example of garden cultivation, containing an extensive collection of varieties of apples, pears and plums in grass, kept as lawn. This could not be regarded as in any way commercial, and we are therefore unable to recommend a first prize.

Frank Penny, Abbey Oaks, Hamstead, Yarmouth, Isle of Wight.

An uncultivated cottage garden holding on very poor land. The vigour of the trees had been still further reduced by cutting off the tops of the growing shoots.

CLASS 2.

First: W. Richards, Poultern, Bentley, Hants.

Five acres partly very closely planted with apples, etc., and partly apples and bush fruit. The whole was cropping very heavily, but the crop had been affected by aphids. The lighter kind of spraying was well done, but the tar-oil winter washing had not been successful. The reason for the latter appeared to be that the wash had been put on with knapsack spraying machines, which do not give sufficient pressure for this work. Thinning of the fruit spurs would reduce the labour of pruning and increase the size of the fruit. An excellent plantation from the commercial point of view.

Equal Second: H. Newman Collard, Whangarei Fruit Farms, Liss.

Half-standard "Lord Derby" and "Newton Wonder" at 15 feet square on sand, partly interplanted and partly cleared. "Monilia" disease was giving the usual trouble on the spurs of "Lord Derby." The old raspberries were a disadvantage rather than an asset. It was almost an impossibility to compare this with the next entry, both being equally meritorious from different points of view. We feel that the only fair solution is to award A TIE.

Equal Second: F. G. Unwin, Hook Fruit Farm, Hook, Basingstoke.

Twelve acres of mixed plantation of apples and black currants, partly intercropped with bulbs. The apple trees were growing strongly and were not yet in full bearing, but most of the black currants were doing well. There was a moderate amount of the commoner pests.

F. J. Emery, Brook Lane, Botley, Hants.

Four acres of mixed plantation. The main plant of the younger side was of "Bramley's" at 36 feet with "Lane's" between, but the older part was very thick. The trees were in themselves too thick to give an even sample or to permit effective spraying. The land was very clean and the undercrops good, and, but for the very serious damage done by aphid of all kinds, this would have been a good entry.

W. H. Myers, Swanmore House, Swanmore, Hants.

This has been a very fine apple orchard, and is now forty years old. Insect pests, however—aphid, woolly aphid, apple sucker, etc.,—had done a lot of damage both to the trees and the crop. Nothing less than a power-spraying outfit would be adequate to restore this fine orchard to health. The grass was being mown and removed—a practice which undoubtedly weakens the trees.

CLASS 3.

First: Major Guy Channer, D.S.O., Woodcock House, Warminster.

There were several excellent plantations of black currants, but this was the best. The bushes were at 6 feet square—quite close enough in the circumstances—and the pruning was light—as it should be when the bushes are vigorous. There were very little reversion and aphid.

Second: Gilbert Reeves, Netherstreet, Bromham, Wilts.

This was a small plantation of mixed bush fruit, put in to test the possibilities of the land. It was doing very well, but the raspberries were very thick and the "Baldwin" black currants were hardly vigorous enough. Aphid had been well controlled and there was very little reversion.

Maurice Portal, Holywell, Swanmore, Hants.

Three acres of "Baldwins" and "Seabrooks," with a few "Boskoops" and "Davisons" black currants. The distance of 5 feet by 2½ feet was too close, even for "Baldwins." Aphid had not quite been controlled, due, as elsewhere, to the use of knapsack spraying machines for the tar-oil washing. The "Baldwins" had been tipped in pruning. This helps to increase vigour, but makes the bushes too thick at the bottom. *This piece is worthy of special mention.*

Scarlett and Davidson, Fair Oak, Eastleigh, Hants.

Three acres of loganberries on very poor land, which had been counteracted to some extent by manuring. Part of the piece lacked vigour, due, it was said, to poaching of the land by ducks in winter. A useful system for holding the young growths by soft wire had been put into practice, but the general system of training was not ideal.

CLASS 4.

First: W. Richards, Poultern, Bentley, Hants.

An exceptionally fine piece of "Boskoop" black currants. The bushes overlapped at 8 feet square. Aphid had been kept down, and there was very little reversion, considering that the bushes were seven years old. A few rogues were seen. The bushes had been winter washed with tar oil and sprayed in spring with lime sulphur.

Second: Miss A. Eaden, Bartley Grange, Bartley, Southampton.

Nine acres of "Seabrooks" and "Edina" black currants, etc., at 6 feet square. There was not much aphid, but there was reversion, especially in one piece of "Edina," which was bad. A variety having the appearance of the "French," but said to be a week earlier, was being grown, and looked promising.

H. Newman Collard, Whangarei Fruit Farms, Liss, Hants

Five acres of mixed small fruit. There was much reversion in the black currants, and the loganberries had not done well. The feature of this field was the "Ciddy Hall" red currant, which was cropping very heavily.

Geoffrey Fry, Oare House, Marlborough, Wilts..

This plantation had suffered during the long illness of the fruit manager. Most of the piece had not been cleaned, and the bushes showed signs of distress. Pruning had been much too severe, and the motor cultivator, where it had been used, had been let in much too deep. The bushes were carrying a fair crop, and prompt action would save the piece.

A. E. Roberts, Burridge, Swanwick, Hants.

This plantation was withdrawn from competition owing to damage by frost, and we did not see it.

CLASS 5.

First: Dr. T. W. Locket, Bratton, Westbury, Wilts.

About three acres of apples, etc., planted for the purpose of testing the district. Pruning and vigour were good; the trees were well sprayed and the land was clean. Many of the trees were suffering from chlorosis, and the ground had been sown with wild white clover in the hope of correcting this. Trials of dressings of aluminium sulphate, at the rate of $\frac{1}{2}$ lb. to 1 square yard, had been made for the same purpose, and appeared promising. There were some fine black currants of the "French" type, which did not suffer. The absence of chlorosis where the soil was deeper was most marked.

Second: George Russell, Little Whitefield Farm, Ryde, Isle of Wight.

Three acres of apples, 18 to 20 feet apart, four to eight years' old, interplanted with roots for cow feeding. Pruning and freedom from pests were good. We were glad to note the promptitude with which unsuitable sorts had been recognized and top-grafted.

H. Newman Collard, Whangarei Fruit Farms, Liss, Hants.

The main plant throughout the 37 acres was "Bramley" or "Newton" at 30 feet on sand. These were interplanted with other varieties, and plums at 15 feet, bush fruit and strawberries. "Grieves" were dying back in a manner common in Hampshire. The top trees were very young and not yet in bearing, so that we had to pay more attention to the commercial value of the undercrops. Some of these were not doing too well for various reasons. The top trees were generally good, and we therefore consider the piece worthy of special mention.

Geoffrey Fry, Oare House, Marlborough, Wilts.

Four acres of standard apples of good commercial sorts at 30 feet apart. Many of the trees were badly attacked by aphid—a very serious trouble to young trees, from which they are slow to recover. The stakes were too close to the trees and some of the ties had cut into the bark.

J. A. Veitch, Ermstone, Shanklin, Isle of Wight.

This plantation, or rather orchard, was conducted for the purpose of producing a comparatively small quantity of fine apples, and could hardly be compared with a plantation run for profit.

Viscount Wolmer, M.P., Estate Office, Blackmoor, Hants.

Five acres of apples on various dwarfing stocks at 8 feet apart, planted on high beds with very tall stakes. The trees were healthy, but some were poor trees, owing to inadequate pruning at the outset. The high beds prevented cross cultivation, and the tall stakes seemed likely to damage the trees.

CLASS 6.

First: Frank J. Emery, Brook Lane, Botley, Hants.

This was a remarkable piece of "Royal Sovereign" strawberries planted in the summer of 1926. It bore unmistakable evidence of great care in the selection of runners over a period of years and in the cultivation. The only criticism we would offer is that rather more straw would prove profitable. Owing to the high cost of purchased manure, these were grown on shoddy and organic manures. Last year the plants provided a good crop and also two runners per plant. All runners are removed immediately after picking, as most would be damaged by the pickers, and then only two are allowed to grow. As compared with his maiden plants, there was less strawberry aphid and more small plants.

We have given equal marks to this competitor's two entries of strawberries, particularly because, taken together, they are well worthy of the award of the Society's Special Medal for the entry gaining the highest score.

Second: Gilbert Reeves, Netherstreet, Bromham, Wilts.

These "Royal Sovereign" strawberries, varying from one to four years old, were also remarkable, and prove the suitability of this new district for strawberry growing. The plants were not so even as in the last exhibit, but the larger plants were more productive. Strawberry aphid was almost absent. With continued careful selection, this strain could be made of exceptional value. Strawing was very poor.

E. J. Fielder, Park Gate, Swanwick, Southampton.

A sudden loss of plants in various places quite spoiled the look of this piece, and it hardly seems fair to point it.

P. J. Kale, Lynefield Cottage, Titchfield, Hants.

The land here was not too good, and the plants looked rather poor and irregular. More careful selection of runners was needed and more manure.

W. Richards, Poulsters, Bentley, Hants.

Two acres of "Royal Sovereign" with "Duke" in places, showed numerous small plants; also some aphid and red plant.

CLASS 7.

First: Henry Peagram, Brook Lane, Sarisbury, Southampton.

Six acres of exceptional strawberries from one to four years old. "Royal Sovereign" was the chief variety, but "Lefebvre" and "Sterlingworth" were also being tried. There was a considerable amount of the strawberry aphid, and one or two minor points might be criticized, but the whole field was magnificent and showed great attention to the needs of the plant.

Second: F. E. Dowland, Bashley, New Milton, Hants.

Another excellent piece of strawberries, but a little more uneven than the winner. There was a small quantity of the strawberry aphid, red plant, and a few rogues.

H. Newman Collard, Whangarei Fruit Farms, Liss, Hants.

Seven acres of "Royal Sovereign," good except where a few runners had been taken. The crop had been much reduced by frost and the piece had not been strawed. There was very little aphid, but a certain amount of red plant was noticed.

CLASS 8.

First: Frank J. Emery, Brook Lane, Botley, Hants.

A very fine piece of maiden "Royal Sovereign," planted last July, and bearing a good crop. The plants were remarkably even, indicating very careful selection and planting, except on one or two soil patches. There was a heavy infestation of the strawberry aphid, and we should imagine that this is the chief reason why no more than two crops are taken from the plants. Taken in conjunction with his entry in Class 6, it is well worthy of the Society's Special Medal.

Second: E. W. Edwards, Brook Lane, Warsash, Southampton.

Being planted in September-October, these plants were smaller than those in the previous entry, and were therefore carrying a smaller crop. The piece was excellent, but in mending up another variety had been used in error and strawing had not been completed. There was a marked improvement in some rows stated to have been dressed with vitriolized bones in March.

H. Newman Collard, Whangarei Fruit Farms, Liss, Hants.

Here again the extensive system of cultivation suffered in points in comparison with the intensive. Nine acres of "Sovereign," "King George," "Lefebvre" and many other varieties were being grown for the supply of plants. Being mostly four months old, they must lose many points for size and productiveness when compared with plants set out last July and August. They were exceedingly vigorous for their age, and the piece is certainly worthy of special mention.

The marks awarded to each competitor are given in the table on next page.

GENERAL.

Comparatively few apple and plum trees were seen throughout this tour, and it does not appear that any considerable quantity is sent to the large markets. Such trees as we saw were usually well set with fruit, but there were exceptions where the crop was being destroyed or greatly damaged by aphid.

The strawberry fields of Hampshire were undoubtedly the main feature of the district. The frost had done little damage except in mid-Hants, and all good plants seemed likely to bear good crops of fine fruit. Small plants were almost as common as elsewhere, and we did not see enough of plantations outside those entered for the competition to enable us to forecast the crop. Black currants, with few exceptions, were also cropping well. The quantity of gooseberries and raspberries seen was small.

APHIS.

Throughout Hampshire in particular, an exceedingly bad attack of aphid of all kinds, but especially the purple apple aphid

Class	No.	Competitor	Award	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	Total points, 100
1	1	Frank Penny		—	—	—	—	—	—	—	—	—	—
	2	S. E. Saunders	2	15	10	12	5	15	—	—	4	5	66
2	3	H. N. Collard	2	14	10	11	12	10	5	12	3	5	82
	4	F. J. Emery		12	6	14	5	15	4	13	3	5	77
	5	W. H. Myers		12	9	10	5	5	4	8	3	5	61
	6	W. Richards	1	12	7	13	10	14	4	15	4	5	84
	7	F. G. Unwin	2	12	10	10	11	13	4	13	4	5	82
3	8	Major G. Channer	1	14	10	13	11	15	5	13	4	5	90
	9	M. Portal	R	10	9	12	12	15	5	13	5	5	86
	10	G. Reeves	2	12	8	11	14	15	5	13	5	5	88
	11	Scarlett & Davidson		14	5	10	14	7	5	12	3	5	75
4	12	H. N. Collard		—	—	—	—	—	—	—	—	—	—
	13	Miss A. Eaden	2	12	9	7	5	14	5	8	3	5	68
	14	G. Fry		12	5	8	7	5	3	8	2	5	55
	15	W. Richards	1	15	8	14	12	14	5	14	4	5	91
	16	A. E. Roberts		—	—	—	—	—	—	—	—	—	—
5	17	H. N. Collard	R	14	10	11	10	8	4	8	4	3	72
	18	G. Fry		15	8	11	4	6	5	11	3	3	66
	19	Dr. T. W. Locket	1	12	10	12	11	11	3	12	4	4	79
	20	G. Russell	2	14	9	11	14	10	4	8	4	4	78
	21	J. A. Veitch		—	—	—	—	—	—	—	—	—	—
	22	Viscount Wolmer, M.P.		10	6	13	15	8	4	7	3	3	69
6	23	F. J. Emery	1	10	—	14	20	15	5	10	14	4	92
	24	E. J. Fielder		—	—	—	—	—	—	—	—	—	—
	25	P. J. Kale		10	—	10	15	10	5	10	12	5	77
	26	G. Reeves	2	10	—	13	20	14	5	10	13	2	87
	27	W. Richards		10	—	6	12	11	5	7	7	3	61
7	28	H. N. Collard		10	—	8	16	10	5	10	10	2	71
	29	F. E. Dowland	2	10	—	12	18	15	5	8	12	4	84
	30	H. Peagram	1	9	—	14	20	15	5	10	14	3	90
8	31	H. N. Collard	R	10	—	5	18	12	5	10	13	4	77
	32	E. W. Edwards	2	10	—	10	18	14	5	8	12	3	80
	33	F. J. Emery	1	10	—	14	20	15	5	10	14	4	92

and both the green and the pale strawberry aphid, was at its height. It will take another week or two before it is possible to count up the cost. Sufficient heavy storms might mitigate the very serious results we anticipate in case of most fruit, but, at the best the loss will be heavy, both in "scrumps" and damage to the young trees.

As far as apples and bush fruit are concerned, a good brand of tar-oil winter wash should have been given *efficiently* in advance. Many exhibitors claimed to have used such a wash, but had failed to achieve the desired result. The chief causes of failure were given in last year's report, but it seems necessary to refer to them again. One cause is the use of an unproved brand. Ample scientific evidence has been published to show that some brands are effective. After this there are three causes of failure : (i) insufficient pressure, (ii) failing to hit every twig from all sides, and (iii) weather. There is no need to blame the weather, because many growers who look on spraying as a part of their business have obtained full control this year with the same weather. We found that in nearly every case knapsack machines had been used. A knapsack machine is excellent for the application of sprays in a fine mist, but long-continued experience has shown it is valueless for tar-oil washes. The first essential is a suitable machine that will give reasonable pressure. After that has been obtained, attention must be given to the thoroughness and method of application and the weather at the time.

STRAWBERRY APHIS.

We noticed four kinds of aphid on strawberries, and two kinds were plentiful. These two were the green aphid, which we have always had with us, and the pale-coloured aphid with no other name apparently than *Capitophorous fragariae*. It is to this pale-coloured aphid that we wish to refer.

Staniland has shown that this pale-coloured aphid is now common, and that it is capable of producing one kind of small plant. When present, it is to be found on the largest and best-looking plants in the field, and very little on the small and weak plants. Growers are therefore apt to think, or pretend to think, that the harm it does is negligible. We consider, however, that it is one of the most serious causes of small plants in some plantations in the Hampshire strawberry district. When a grower has managed to deal with all the other difficulties, this pest beats him, to the extent that he cannot grow more than two good crops. The best way of dealing with it has yet to be demonstrated, but we desire to warn strawberry growers seriously, feeling, as we do, that if they will give as much consideration to this matter as they have done to the others, they will soon find out how to deal with it themselves.

FRUIT-GROWING IN WILTSHIRE.

We were interested to see the efforts which are being made to test out the soils of this county for commercial fruit-growing, and wish to congratulate Mr. Crisp, the County Horticultural Adviser, on the assistance he is giving to the pioneers.

The most marked success had been attained with the "Royal Sovereign" strawberries on the red sandy soils at Bromham. The best of the plants reminded us of pre-war strawberry growing. Continued selection, careful cultivation, and timely attention to the aphid problem, if it arises, should result in the establishment of a profitable industry.

Black currant growing had also been established on sound lines here and also on the sand at Warminster and the chalk land near Westbury. In the case of raspberries, we would recommend a trial of thick rows against limitation of canes, and prevention of spawn.

It seems possible that a profitable apple-growing industry might be started where the soil is not too close to the chalk or limestone, and provided that varieties are chosen which suit both the soil and the large markets. While we sympathise with the planters' desire to plant sorts which do well with him and sell well locally, we would point out that, if many were planted, there would be a surplus for disposal in the big markets, where unknown sorts are practically valueless. From a commercial point of view, these sorts are therefore undesirable.

Spraying plays an ever-increasing part in modern fruit-growing, and we were glad to see that special attention is being paid to this in Wiltshire.

In conclusion, we should like to thank all those who kindly assisted in making our task so thoroughly enjoyable, especially

C. J. Gleed, The Education Office, Winchester.

E. W. Edwards, Swanwick and District Fruit Growers.

C. S. Martin, County Council Office, Newport, I.W.

W. C. Crisp, Agricultural Dept., Trowbridge, Wilts.

Our thanks are also due to the competitors and to Mr. E. C. Boughton.

J. TURNBULL
W. P. SEABROOK } *Judges.*

REPORT OF THE COUNCIL TO THE
ANNUAL GENERAL MEETING OF GOVERNORS
AND MEMBERS OF THE SOCIETY,

HELD AT THE

ROYAL AGRICULTURAL HALL, ISLINGTON, LONDON, N.

On WEDNESDAY, December 12, 1928, at 2.30 p.m.

Membership.

1. The Council have to report that the list of Governors and Members has undergone the following changes since the Annual General Meeting on December 7, 1927 :—1 Life Governor has been elected under Bye-law 4, 50 new Governors (including 29 transferred from the list of Members under Bye-law 9), and 481 new Members have joined the Society, and 3 Members have been re-instated under Bye-law 14 ; whilst the deaths of 1 Honorary Member, 6 Life Governors, 8 Governors, 82 Life Members, and 215 Members have been reported. 11 Life Members and 25 Members have been struck off the books under Bye-law 12, owing to absence of addresses ; 2 Governors and 161 Members under Bye-law 13, for arrears of subscription ; 8 Governors and 371 Annual Members have resigned.

2. The special thanks of the Council are due to Mr. Adeane for his effort in obtaining new Governors of the Society which resulted in 35 Governors being elected on his nomination during the year.

3. In the present year the Council have suffered the loss by death of four of their number—the Duke of Richmond and Gordon, K.G., Mr. G. P. Miln, Mr. Richardson Carr, and Mr. Christopher Middleton.

4. The Seventh Duke of Richmond, whose house has been associated with the Society since its foundation, had served on the Council since 1905 ; in 1915 he became a Vice-President, and he filled the Presidential chair in 1916 when the Show was held at Manchester.

5. Mr. Miln joined the Society in 1899, and since 1922 had been a Member of Council as one of the representatives of Cheshire. He interested himself particularly in the work of the 1925 Show at Chester.

6. Mr. Richardson Carr became a Member in 1889, and joined the Council as the representative of Hertfordshire in 1905, in which year he served on the Special Committee which reported as to the reforms and economies desirable to put the Society on a sound footing ; he took a most active part in the

Committee work of the Council, being Chairman for several years of the Stock Prizes and Judges Selection Committees. From 1906 to 1917 Mr. Carr was a Steward of the Finance Department at the annual show, in which office his services were of inestimable value.

7. Mr. Christopher Middleton, one of the representatives of Durham, joined the Society in 1881, and had been a Councillor since 1904. He served on the Special Committee of 1905, and did useful work on the Chemical Committee for many years.

8. Mention must also be made of the passing of the late Mr. L. C. Wrigley. At the time of his death he was not a Member of the Society's Governing Body, but he had represented the Monmouthshire Division on the Council from 1908 till 1917. From 1916 to 1927 Mr. Wrigley acted as a Steward of Stock at the show.

9. Deep sympathy will be felt by all Governors and Members with Lord and Lady Daresbury and their family in the bereavement they sustained in July by the death of their eldest son, the Hon. Gilbert Greenall.

10. Amongst other Governors and Members whose loss by death the Society has to deplore are: His Grace The Duke of Newcastle; the Marquis of Lincolnshire, K.G.; the Earl of Abingdon; the Earl of Durham, K.G.; the Earl of Warwick, C.M.G., M.V.O.; Viscount Hambleden; the Right Rev. The Lord Bishop of Bangor; Lord Eversley; Lord Glanusk, C.B., C.B.E., D.S.O.; Lord Pontypridd; Lord Sackville; the Hon. G. W. Lascelles, C.B.; the Right Hon. Sir J. T. Agg-Gardner, M.P.; the Right Hon. Sir F. L. Cartwright, G.C.V.O., K.C.M.G.; the Right Hon. Sir Lawrence H. Jenkins, K.C.I.E.; the Right Hon. Sir G. O. Trevelyan, Bart.; Sir W. Selby Church, Bart., K.C.B.; Sir Edward Holt, Bart.; Sir C. J. Jessel, Bart.; Sir Lees Knowles, Bart.; Sir Henry F. Lennard, Bart.; Sir George A. Meyrick, Bart.; Sir Oswald Mosley, Bart.; Sir Francis E. Walker, Bart.; Sir George Chamberlin; Sir Charles Cottier; Major-Gen. Sir Henry Ewart, G.C.V.O., K.C.B.; Sir T. M. Franklen; Sir W. Anker Simmons, K.B.E.; Sir J. I. Thornycroft, F.R.S.; Major Robert Barbour; Prof. E. M. Crookshank; Mr. G. P. Tyrwhitt Drake; Lieut.-Col. Walter Faber; Colonel L. G. Gisborne, C.M.G.; Mr. S. W. Gould; Mr. Walter Hill; Mr. Myles Kennedy; Mrs. J. L. Luddington; Lieut.-Col. W. J. F. Ramsden; Mr. Harold Swithinbank; Mr. George Twentyman; Mr. J. R. Twentyman and Mr. C. W. Walker-Tisdale.

Numbers on Register.

11. The above and other changes bring the total number of Governors and Members at present on the Register to 11,571, divided as follows:—

159 Life Governors ;
 278 Annual Governors ;
 1,973 Life Members ;
 9,145 Annual Members ;
 16 Honorary Members ;

11,571 Total number of Governors and Members, as against a total of 11,954 on the Register at the time of the last Annual Report.

12. The following table shows the reduction in membership in the various Counties during the last 3 years.

County	August 1st 1925	August 1st 1928	
BEDFORD	128	102	— 26
BERKSHIRE	207	246	+ 39
BUCKINGHAM	195	186	— 9
CAMBRIDGE	303	211	— 92
CHESHIRE	923	616	— 307
CORNWALL	108	93	— 15
CUMBERLAND	193	147	— 46
DERBY	299	249	— 50
DEVON	193	179	— 14
DORSET	114	106	— 8
DURHAM	310	221	— 89
ESSEX	343	275	— 68
GLAMORGAN	141	121	— 20
GLOUCESTER	331	325	— 6
HAMPSHIRE AND ISLE OF WIGHT AND CHANNEL ISLANDS	348	327	— 21
HEREFORD	192	191	— 1
HERTFORD	239	203	— 36
HUNTINGDON	57	40	— 17
KENT	444	373	— 71
LANCASHIRE AND ISLE OF MAN	532	412	— 120
LEICESTER	284	248	— 36
LINCOLN	433	378	— 55
LONDON	577	532	— 45
MIDDLESEX	98	80	— 18
MONMOUTH	99	156	+ 57
NORFOLK	474	381	— 93
NORTHAMPTON	251	219	— 32
NORTHUMBERLAND	534	325	— 209
NOTTINGHAM	215	240	+ 25
OXFORD	205	208	+ 3
RUTLAND	48	46	— 2
SHROPSHIRE	463	359	— 104
SOMERSET	196	184	— 12
STAFFORD	312	278	— 34
SUFFOLK	327	265	— 62
SURREY	233	211	— 22
SUSSEX	413	381	— 32
WARWICK	278	255	— 23
WESTMORLAND	98	94	— 4
WILTSHIRE	211	208	— 3
WORCESTER	223	190	— 33
YORK (EAST RIDING)	162	130	— 32

<i>County</i>	<i>August 1st</i> <i>1925</i>	<i>August 1st</i> <i>1928</i>	
YORK (NORTH RIDING)	296	256	— 40
„ (WEST RIDING)	367	305	— 62
NORTH WALES	420	293	— 127
SOUTH WALES	140	137	— 3
SCOTLAND	325	310	— 15
IRELAND	94	72	— 22
FOREIGN AND COLONIAL	253	237	— 16
NO ADDRESS	26	26	
Total	<u>13,655</u>	<u>11,627</u>	<u>— 2,028</u>

13. It will be seen that during this period a loss of over 2,000 members has been sustained, and Members of the Society are earnestly asked by the Council to use every effort in their power to secure new Members to make up this loss. The Council realise the difficulties to be encountered, owing to the depression in the agricultural industry, which has so adversely reacted upon the Society's membership roll, but they feel that this is an additional reason why Members should be requested to endeavour not only to stop the continued decrease but to assist in increasing the membership even beyond that attained in 1925.

Governors.

14. It is with particular pleasure that the Council report that H.R.H. Princess Mary Viscountess Lascelles, G.B.E., has joined the Society as a Life Governor.

15. Mr. Thomas L. Aveling (who represented Kent on the Council from 1905–1927), Mr. F. S. Courtney, M.Inst.C.E. (late Consulting Engineer), and Sir John McFadyean, M.B., B.Sc., M.R.C.V.S. (late Consulting Veterinary Surgeon), have been elected Honorary Life Governors; and Mr. J. W. Glover has been elected a Life Governor under Bye-law 4.

Honorary Members.

16. In recognition of their services to Agriculture, Sir William Somerville, M.A., D.Sc., Sir Rowland Biffen, F.R.S., and Sir Francis Floud, K.C.B., have been elected as Honorary Members of the Society.

Presidency.

17. The Council have decided to recommend to the Annual Meeting the election of Viscount Lascelles, K.G., as President of the Society to hold office until the Annual Meeting in 1929.

Changes in the Council.

18. To fill vacancies which have occurred, Viscount Tredegar has been elected a Vice-President; Mr. Edward Bohane has been elected as the representative of Ireland, and Mr. H. P. Mortimer has been elected as a representative of Cheshire.

Consulting Engineer.

19. Dr. B. J. Owen, M.A., Director of the Institute of Agricultural Engineering, Oxford University, has been appointed as Consulting Engineer to the Society in succession to Mr. F. S. Courtney, who retired at the end of last year.

Congratulations.

20. During the year the Council have had occasion to congratulate Sir Edward Curre on the baronetcy conferred upon him by His Majesty, and Dr. J. Augustus Voelcker, Consulting Chemist, on being made a C.I.E.

Elections to the Council.

21. Members of Council who retire by rotation at the forthcoming Annual Meeting are those representing the electoral districts of Group B, viz., Buckinghamshire, Devon, Durham, Essex, Herefordshire, Leicestershire, London, Nottinghamshire, Rutland, Shropshire, Suffolk, Surrey, Wiltshire, Yorkshire West Riding, and South Wales. Governors and Members registered in those districts have been notified, and the customary procedure is being followed for the election or re-election of representatives for the Divisions concerned.

Council Meetings in 1929.

22. The Council will meet upon the following dates in 1929 :— February 6, March 6, April 10, May 8, June 5, July 10 (in Harrogate showyard), July 31, November 6, December 11 (Annual General Meeting).

Accounts.

23. In compliance with the Bye-laws, the balance-sheet has to be presented for consideration at the Annual Meeting. The Council therefore beg to submit the Balance-sheet, with Receipts and Payments for the year 1927. These Accounts were published in Vol. 88 of the *Journal* issued to Governors and Members this year, having been certified as correct by the Professional Accountants and Auditors appointed by the Members. Copies of the Accounts will be available for reference at the Meeting on December 12.

Nottingham Show.

24. Honoured by visits from Their Majesties The King and Queen and H.R.H. The Prince of Wales, and favoured with exceptionally fine weather, the Society's third Show at Nottingham was successful in every way.

25. Ten Thousand Pounds was again the sum voted by the Council for Prizes, and this was supplemented by handsome contributions from the Local Committee at Nottingham and the various Breed Societies. Entries in all sections showed an increase over the previous year's exhibition. Two breeds of cattle and six breeds of sheep had their classification cancelled

owing to the entries and/or exhibitors not reaching the minimum numbers laid down in the new regulation of which notice was given in the last Report.

26. In consequence of the confirmation during the Show of an outbreak of Foot and Mouth Disease at Stockton Lane, York, the Ministry of Agriculture issued an Order dated July 11, the provisions of which included the isolation of animals at the Show which had been brought from the infected area. This necessitated the removal from the showyard and detention in isolation premises of four cattle and 34 pigs. All other Show animals except horses were licensed back to their destinations by the Ministry at the end of the Show.

27. With the experience of the past three Shows, the Council have made a request to the Ministry to consider the practical advantage, in case of any future outbreaks in the country when the Show is in progress, of sending all the animals from the infected area back to that area by train and isolating them on the premises of their owners.

28. A special feature of the Show was the grouped exhibit of Dairy Machinery, Implements and Utensils organised by the Committee of the Eighth World's Dairy Congress, many of the delegates to which, representing 47 countries, were present at Nottingham.

29. The party of farmers from various parts of the Empire who made a tour of this country in the summer under the auspices of the British National Union also visited the Show.

30. Admissions by payment for the five days of the Show totalled 108,677. The audited accounts will, in accordance with the usual practice, be submitted at the Annual Meeting.

31. The Society is greatly indebted to the Lord Mayor and Corporation of Nottingham for their hospitable reception, and to the Nottingham Local Committee for all the work they did to promote the success of the Show. The thanks of Governors and Members to these bodies were heartily accorded in resolutions passed at the general meeting in the showyard.

Merchants of the Staple Prizes for Wool.

32. A sum of £500 has been received from the Merchants of the Staple of England (a body dating back to the reign of Edward III) for the establishment of a fund for the purpose of providing out of the yearly income thereof annual prizes to be competed for by growers of wool. Accordingly, two special cash prizes, known as "The Merchants of the Staple of England Prizes," were awarded at the Nottingham Show this year (1) for the best fleece taken from any long-woolled breed of sheep, (2) for the best fleece taken from any short-woolled breed of sheep. Similar prizes will be offered annually at the Society's Show.

Deputation to Railway Clearing House.

33. Early in the year a deputation from the Council waited upon the Railway Officers at the Railway Clearing House to discuss with them the question of the reduction of the charges upon provender accompanying live stock to agricultural shows. As the result of this interview, the Railway Companies agreed to modify their arrangements as from the beginning of April last. Provender in excess of the free weight allowances (which remain unaltered) conveyed in the same vehicle as the live stock is now charged at *half* the previous exceptional Owners' Risk Parcels Scale of Rates.

Railway Rates Tribunal.

34. The Council have become annual subscribers to the funds of the Joint Committee of British Live Stock Breeders in order to support the work of that body on behalf of stock-owners before the Railway Rates Tribunal.

Accommodation and Recreation for Herdsmen, Stockmen, etc., in Showyard.

35. At the conclusion of the Newport Show last year representations were made by the Stockmen that some further provision should be made for the comfort and welfare of the Exhibitors' Servants engaged in the stockyard of the Show.

36. As some Societies are now devoting considerable attention to this matter it was felt that the Royal Agricultural Society of England should not lag behind, and consequently at the Nottingham Show a larger number of sleeping-boxes, stalls and pens was provided than had hitherto been the case. Two forage yards were constructed and also two Stockmen's dining-rooms, which proved a great convenience in view of the distance from one end of the showyard to the other.

37. The catering at these dining-rooms was also improved upon and it is hoped that with more experience and supervision in this particular department of the caterers' work still further improvement will be effected.

38. The Stewards in each section were asked to make enquiries as to the welfare of the men and to bring forward any complaints received from them, but, apart from a few minor matters which were rectified at once, these Officials had nothing to report.

39. An innovation at the Show this year was the provision of three coffee bars for the use of grooms, herdsmen, shepherds, etc. These were open on the Friday evening before the Show commenced and continued their service until the Show actually opened. They were re-opened on Saturday evening, at the close of the Show, until the following Monday. The tents, gas and water services were provided by the Society, but the tea, coffee, food, etc., was provided by the Women's Auxiliary of the Young

Men's Christian Association. This scheme enabled the men to get hot tea and refreshments immediately on arrival and just before departure. The charges made were very moderate, and the men highly appreciated it. The thanks of the Society are due to the organisers and to the ladies who gave their services, some of whom remained on duty for each of the nights during which these small canteens were open and who looked after the comfort of the men with the greatest care and thought.

40. Another innovation which proved an inestimable boon to the Exhibitors' servants was the provision of reading matter and writing materials in the large members' tent, a portion of which was placed at the disposal of the Young Men's Christian Association for this purpose.

41. Perhaps one of the most appreciated introductions at the Nottingham Show was the Concerts in the large tent in the evening. The Young Men's Christian Association readily acquiesced in the request made to them by the Society that some pleasant means of passing the time in the evenings should be provided by them. Excellent concerts with a change of programme and entertainers each evening were arranged. A Wireless Loud Speaker was installed; Community Singing also was one of the features of the concerts.

42. The appreciation of the men was spontaneously expressed on the last night of the Show, and the Society is under a deep debt of gratitude to the Young Men's Christian Association and to the Divisional Secretary, Mr. Arthur W. Hayes, for all the trouble taken by them in organising these Concerts.

43. They were in the nature of an experiment, but so well were they carried out by the organisers, and so highly appreciated were they by the men, that they will be looked for in future years and will become an integral part of the Royal Show.

"New Implements."

44. Still further consideration has been given to the regulations, and in view of the operation of those in force for the Nottingham Show and the experience gained by Dr. B. J. Owen, the new Consulting Engineer to the Society, other amendments are contemplated.

Trials.

45. The Trial of Seed Drills suggested by the Research Committee as a result of experiments conducted at the Norfolk Agricultural Station is still receiving the careful consideration of the Implement Committee.

46. The Implement Committee is also considering the advisability of holding further Trials of Sugar Beet Root Lifters and Harvesting Machinery. Representations have been made to them that improvements have been effected in these machines

since the last Trials at Kelham in 1925, and a Conference with the Ministry of Agriculture and Fisheries is to be held to discuss the position which has now arisen. If the circumstances warrant it, Trials will doubtless be arranged in the autumn of 1929.

Plantations Competition.

47. This year's Competition for Plantations and Estate Nurseries was restricted to the counties of Norfolk, Suffolk, Essex, and Cambridge. In all, 42 entries were received. The Marquis of Lothian, Blickling, won the Special Medal for the best-managed woodlands on an estate not less than 1,000 acres in area, and the Royal English Arboricultural Society's Gold Medal for the best plantation was awarded to Lt.-Col. B. J. Petre, of Westwick, Norwich.

48. In 1929 the Plantations and Nurseries Competition will be restricted to the county of Yorkshire.

Orchards and Fruit Plantations.

49. There were 33 entries in this year's competition, which was confined to Dorset, Wiltshire, Hampshire and the Isle of Wight. The Special Medal offered by the Society for the entry receiving the highest number of points in any one of the classes was awarded to Mr. Frank J. Emery, of Brook Lane, Botley, Hants.

50. Begun in connection with the Cambridge Show of 1922, these competitions have been conducted annually until all districts have been visited where sufficient fruit is grown to warrant the organisation of competitions. They have proved to be so popular with the growers that the Council have now decided to continue them for another five years.

51. In 1929, the East Riding of Yorkshire, Lincolnshire, Norfolk and the Isle of Ely will form the area of the competition.

Awards for Long Service.

52. The Counties of Norfolk, Suffolk, Essex and Cambridge were this year included in the scheme for the award of the Society's bronze medals and certificates to farm servants for long service. Medals and certificates will be forwarded in due course to those qualified to receive them.

Next Year's Show.

53. The Eighty-eighth Annual Exhibition of the Society will be held at Harrogate from Tuesday, July 9, to Saturday, July 13. In view of the visit of the National Society, the Yorkshire Agricultural Society have decided not to hold their show in 1929.

Prize List.

54. The Prize List for the 1929 Show will, with certain alterations, be similar to that for the Nottingham Show. Offers

of Champion and other prizes have been received from the following :—Shire Horse Society, Clydesdale Horse Society, Suffolk Horse Society, British Percheron Horse Society, Hunters' Improvement and National Light Horse Breeding Society, National Pony Society, Shetland Pony Stud Book Society, Shorthorn Society, Hereford Herd Book Society, Devon Cattle Breeders' Society, Sussex Herd Book Society, Sussex Cattle Breeders' Society of South Africa, Aberdeen-Angus Cattle Society, English Aberdeen-Angus Cattle Association, Argentine Aberdeen-Angus Association, Dun and Belted Galloway Cattle Breeders' Association, Dairy Shorthorn Association, Lincolnshire Red Shorthorn Association, Red Poll Cattle Society, British Friesian Cattle Society, Ayrshire Cattle Herd Book Society, English Guernsey Cattle Society, English Jersey Cattle Society, British Kerry Cattle Society, Dexter Cattle Society, Co-operative Wholesale Society, Oxford Down Sheep Breeders' Association, Shropshire Sheep Breeders' Association, Hampshire Down Sheep Breeders' Association, Suffolk Sheep Society, Dorset Down Sheep Breeders' Association, Dorset Horn Sheep Breeders' Association, Wiltshire or Western Horn Sheep Society, Ryeland Flock Book Society, Kerry Hill (Wales) Flock Book Society, Lincoln Longwool Sheep Breeders' Association, Society of Border Leicester Sheep Breeders, Kent or Romney Marsh Sheep Breeders' Association, Swaledale Sheep Breeders' Association, Herdwick Sheep Breeders' Association, Cheviot Sheep Society, Black Welsh Mountain Sheep Breeders' Association, National Pig Breeders' Association, Large Black Pig Society, Gloucestershire Old Spots Pig Society, Cumberland Pig Society, Essex Pig Society, National Long White Lop-Eared Pig Society.

Special Prizes are being contributed in the Poultry section by the Sussex Poultry Club, Buff Orpington Club, Columbian Wyandotte Club, British Black Barnevelder Club, British Black Leghorn Club, Campine Club, and Magpie Duck Club.

To ensure that Bulls and Boars exhibited at the Society's Show should have proved themselves stock getters the Council have adopted the following regulations for insertion in the Harrogate Prize sheet :—

"No bull three years of age or upwards on May 1, 1929, shall be eligible to compete for any prize unless such bull shall have sired at least three living calves born within twelve months previous to above date, the births of which calves shall have been notified to the Society publishing the Herd Book or Register of the breed.

"No boar two years of age or upwards on May 1, 1929, shall be eligible to compete for any prize unless such boar shall have sired at least three live litters born within twelve months previous to above date and the pigs from those litters shall have been

accepted or are eligible for registration in the Herd Book of the breed."

Closing of Entries.

55. Intending exhibitors at Harrogate are reminded that the latest date for receiving entries of horses (breeding classes), cattle, goats, sheep and pigs is May 1. Entries of Riding and Driving Horses and Local Classes close May 31. Entries of Produce close on May 20. Entries of Poultry close on May 31.

Applications for space in the Implement, etc., Department must be made not later than March 20.

Entries of New Implements for the Society's Silver Medal must be made by March 1.

Schedules and entry forms will be ready for issue in the New Year. To prevent disappointment, Members are particularly requested to make early application.

Shows of 1930 and 1931.

56. As announced in the last report, the annual show will take place at Manchester in 1930, and at Warwick in 1931.

Judges in South America.

57. At the request of the Argentine Rural Society, the Council again appointed Judges to officiate at the Palermo Show. The panel this year was as follows:—

Shorthorns.—Mr. John Barnes, Aikbank, Wigton.

Herefords.—Mr. H. R. Evans, Marston Court, Pembridge.

Aberdeen Angus Cattle and Clydesdale Horses.—Mr. J. McG. Petrie, Asleid, New Deer.

Lincoln Sheep, Blackface Sheep, and Shire Horses.—Mr. F. A. Good, Potterhanworth, Lincoln.

Pigs.—F. Townsend, Highfield, Moor Allerton, Leeds.

Mr. Barnes and Mr. Evans also acted as Judges for the Rural Association of Uruguay at their Monte Video Show.

Chemical Department.

58. The work of the Chemical Department, though the number of samples has undergone some diminution, continues to show useful activity, and, from time to time, interesting information has been given in the monthly reports of the Council meetings. The samples analysed have been 228 as against 291 in 1927. Of these, different offals have formed a considerable proportion, and also samples of lime. In neither of these groups has a fully satisfactory position been reached, but it is hoped that the introduction of the new Fertilisers and Feeding Stuffs Act will effect an improvement.

59. As before, several cases have occurred in which compound cakes or meals, sold on guarantee, have been found not to comply with this, or to be composed of ingredients different from those stated to be present. Renewed attention has been called to

condimental and similar preparations, often sold at exorbitant prices, and it would seem, from correspondence received later, that the warnings given have had some effect. Reference is made to a case of cattle-poisoning through the occurrence—in a compound food—of castor-oil bean seeds.

60. Fertilisers generally have been of satisfactory nature and quality, with the exception, as stated, of lime, more particularly ground lime. This latter seems hard to get of good and reliable quality, and there should be a good opening for firms who are ready to supply a really good and pure ground lime. Several samples of sugar-beet and of sugar-beet pulp have been sent, and the occurrence of arsenic in hops has been noted. An interesting case of the poisoning of fish through the use of weed-killer on paths leading into ponds also occupied attention; while, as usual, there were not a few examples of deficiency in lime in samples of soil sent for analysis.

61. The coming into force of the Fertilisers and Feeding Stuffs Act, 1926, on July 1, 1928, marks an important era. The regulations affecting it have been widely discussed, and general agreement upon them reached, while the appointment of a permanent Advisory Committee, to consider any changes that may from time to time be called for, ensures that the Act will be carefully watched and kept up to date. Doubtless, in the course of working, many questions will arise, but these will be referred to the Advisory Committee, and it is confidently hoped that the new Act will be found a good and workable Measure and a great improvement on the old Act.

62. The Chemical Committee have lost, by death, one of their oldest and most active members, Mr. Christopher Middleton, who always took a deep and practical interest in the work of the Committee; also, by retirement, their late Chairman, Mr. J. L. Luddington, who, among other activities, had been concerned largely with the introduction of the new Fertilisers and Feeding Stuffs Act. His place is taken by Mr. H. Dent Brocklehurst.

Botanical Department.

63. Problems associated with the diseases of farm crops and, to a greater extent than usual, with the diseases of market-garden and fruit crops, have constituted the greater part of the work of the Botanical Department during 1927–1928. Most of the diseases were due to well-known parasitic fungi. Their effects on the crops appear to have been less serious than usual. Enquiries with regard to grassing down arable land and the use of artificial manures on permanent grass-land showed a tendency to increase. About the usual number of plants was identified. These were for the most part weeds of arable land, but the list of species was lengthened by the inclusion of two collections from

pastures suspected of containing plants poisonous to stock. The number of samples of seeds tested was again small.

Zoological Department.

64. Injurious insects have been abundant during the year, and the full list of those noted would be a long one, though most are too familiar to have been the subject of enquiry by Members. The outstanding pests seem to have been slugs in the early months of the year and aphids later on. Tar distillate washes have greatly diminished the harm done to fruit trees by aphids, but almost all other crops have suffered badly. The bean aphid in particular has been destructive, not only to beans, but to mangold, sugar-beet, carrots and parsnips. The only novelty recorded is a gall-mite disease of poplar trees not hitherto observed in England. Advice has been given with regard to some other forestry pests, but most of the enquiries in this section have had relation to insects attacking the dead timber stacked in timber-yards. Various insects have been sent for identification, most of them infesting stored products or furniture.

Animal Diseases.

65. There has been an increase in the number of outbreaks of Foot and Mouth Disease compared with 1927. The figures, however, with regard to parasitic mange in horses, swine fever and sheep scab, all show a considerable diminution as compared with last year. Outbreaks of anthrax have increased by nearly 30 per cent., but in spite of the increase the figures for 1928 are considerably lower than those for 1925 and 1926.

66. The prevalence of mastitis in dairy herds has been a source of considerable loss to stockowners during the period under review. Judging from reports and enquiries for assistance from stockowners, Johnes's disease has not been so prevalent. This may be partly due to the prolonged dry period, for it is well known that such conditions are to some extent unfavourable for the propagation of the disease. The same explanation is probably true in the case of the disease known as parasitic gastritis in sheep, there having been few reports of the existence of the trouble.

67. The establishment by the Society of a Quarantine Station for the necessary observation on stock intended for export has already proved of inestimable benefit to the trade in Pedigree Cattle, and is a further example of the practical suggestions which are being from time to time carried into effect by the Society for the benefit of agriculturists.

Consulting Veterinary Surgeon.

68. Sir John McFadyean, in April last, tendered his resignation of the appointment of Honorary Consulting Veterinary

Surgeon to the Society, which he had held since 1904. The Council accepted this resignation with regret, and, in recognition of Sir John's loyal and valuable services to the Veterinary Committee and to the Society, elected him as an honorary Life Governor. They also asked him to accept a piece of plate suitably inscribed as a memento of his long association with the Society.

69. On the recommendation of the Veterinary Committee, the Council have appointed Professor F. T. G. Hobday, C.M.G., F.R.C.V.S., Principal of the Royal Veterinary College, as Consulting Veterinary Surgeon to the Society.

Imported Meat.

70. At their May meeting, the Council passed a resolution urging on the Minister of Agriculture "the desirability that all frozen or chilled meat imported from any country in which Foot and Mouth Disease exists should be placed in cold storage at the ports in Great Britain, retained there, and not exposed on the market until sufficient time has elapsed for the virus of the disease possibly present in the marrow of the bones to have died."

71. It is understood that further experiments with actual sides of beef in a refrigerating chamber are now being conducted by the Foot and Mouth Disease Research Committee in regard to the length of life of the disease virus.

Delay in Notification of Disease.

72. In a circular letter dated January 3, the Ministry of Agriculture called attention to the serious delay which had occurred in many cases in reporting outbreaks of Foot and Mouth Disease. The Council thereupon by resolution called the attention of Members of the Society to the extreme importance of immediate notification on the least suspicion of the existence of the disease, and stated that they were prepared to support the Ministry in any further steps it might deem wise to take to put an end to the concealment which is causing such widespread loss. They also invited the co-operation of the National Farmers' Union through their County Branches in once more bringing to the notice of farmers the urgent importance of immediate notification.

Inadequate Penalties for Concealment.

73. On more than one occasion the Council have had brought to their notice cases in which owners of animals suffering from Foot and Mouth Disease have been prosecuted for failing to report the existence of the disease, and in which most inadequate penalties have been inflicted. The Council regarded the position of affairs as so unsatisfactory that they made strong representations to the Home Office and the Ministry of Agriculture on the matter. There would, however, appear to be serious objections

to the Home Office addressing a communication to magistrates on such a matter.

74. Joint action between the Society and the National Farmers' Union is now being considered with the view of impressing upon magistrates the great importance of more drastic action on their part.

Quarantine Station.

75. On page 9 of the Report of the Council for last year the scheme for the provision of a Quarantine Station in the Port of London which would facilitate the export of Live Stock to the Dominions from this country was mentioned. Since then the requisite formalities have been complied with and the Deed indemnifying the Society against all financial commitments and liabilities has been entered into by the Government. The lease of the premises at the East India Dock has been completed and the conversion of the premises, undertaken by the Walker Weston Co., was carried out within the time stipulated in the contract.

76. This enabled the Station to be opened by the Rt. Hon. L. S. Amery, Secretary of State for the Dominions, on the afternoon of the 4th April. At the Official Opening, when the President, Lord Harlech, took the Chair, there were present, in addition to the Secretary of State for the Dominions, the Earl of Stradbroke, Parliamentary Secretary to the Ministry of Agriculture and Fisheries; Sir Charles Howell Thomas, Permanent Secretary to the Ministry of Agriculture and Fisheries; Mr. S. G. Tallents, Secretary, Empire Marketing Board; Members of the Council of the Royal Agricultural Society of England; High Commissioners of various Dominions; Secretaries of Breed Societies; Representatives of Shipping Companies; as well as Officers of the Port of London Authority, the Ministry of Agriculture and Fisheries, Royal Veterinary College, etc.

77. After the Station had been formally opened and the Secretary of State thanked for his good offices, Sir Merrik Burrell, Chairman of the Quarantine Station Committee, outlined the scheme and stated that the Station was now ready to receive stock; the requisite forms containing all the information required had been prepared and were obtainable then and there. He advised Breed Society Secretaries and potential exporters to take a supply of these with them and hoped that they would lose no time in filling the Station and proving its value as a means of reviving our live stock export trade which had been in abeyance for such a long period. A very competent Manager and Staff for the Station had been engaged and the administrative section at the office of the Royal Agricultural Society of England was complete and ready to commence work at once.

78. The accommodation consists of 28 Boxes and 18 Stalls and these can be adapted to the particular requirements of exporters and the breed, sex or kind of animal to be shipped.

79. The first consignment of stock entered the Station on April 25, and consisted of 6 Bulls for Southern Rhodesia. Subsequent consignments have been dealt with as follows :—

June 8th—4 Cattle }
 2 Pigs }
 3 Sheep } for South Africa and Southern Rhodesia.

June 23rd—3 Cattle, for South Africa.

July 25th—10 Cattle }
 62 Sheep } for Irish Free State.
 32 Pigs }

The Quarantine Station for this period was full.

August 17th—36 Cattle }
 12 Sheep } for South Africa.
 5 Pigs }

The Quarantine Station was again filled for this period.

Sept. 1st—17 Cattle, for Southern Rhodesia.

Sept. 18th—18 Cattle }
 39 Sheep } for Irish Free State.
 13 Pigs }

The Quarantine Station was again filled for this period.

October 12th—46 Cattle }
 1 Sheep } for South Africa.

This consignment filled the Quarantine Station.

Oct. 27th—12 Cattle.

Nov. 10th—7 Goats.

Dec. 4th—There are very few enquiries for this period which connects with a free freight steamer to South Africa, but there is a possibility that part of a consignment of 46 head for Southern Rhodesia under a recently arranged freight scheme may be purchased in time to be sent by this sailing.

Dec. 19th—This quarantine period has been fixed for the Irish Free State, and so far it is known that about 20 head of livestock is available. Four pigs for the Government of Trinidad may also enter for the same period.

80. The above details show that the Station has proved its worth and it is unfortunate that the Dominions of New Zealand, Australia and Canada have not yet accepted the conditions of the Quarantine Scheme prior to the export of stock to those countries. A printed despatch has, however, been sent to all the Dominions, and it is hoped that soon all will agree to accept the standard regulations governing the export of stock through the agency of the Quarantine Station.

81. The Society is confident that the action taken by it in advocating the erection and use of a Quarantine Station has been justified. It does not gain in any way financially by the results, nor, on the other hand, is it subject to any claims for damage or other liabilities. The Society's object in suggesting and undertaking the scheme is simply to help the exporter of

Pedigree Live Stock and to foster the trade of the breeder in this country. The fees payable are moderate and exporters can have every confidence in making use of the Station.

Research Committee.

82. The customary annual Report on the work of the Research Committee appeared in Vol. 88 of the *Journal* issued this year. In *Occasional Notes*, issued in June to Governors and Members, was given the Report of an experiment conducted at the Norfolk Agricultural Station to test "The Value of Dried Sugar Beet Pulp in the Production of Winter Beef." Work still in progress includes Barley Research at the Norfolk Agricultural Station; Lucerne Inoculation under the supervision of the Rothamsted Experimental Station; Grassland Improvement, at Shoby, Leicestershire; and an investigation into Mastitis in Cows undertaken by the Research Institute of the Royal Veterinary College.

"Agricultural Research in 1927."

83. It will be remembered that, in addition to the *Journal*, the Society now publishes an annual bulletin, the object of which is to give the results of agricultural research at home and abroad in the previous year. A third volume, entitled *Agricultural Research in 1927*, has now been printed, and copies are being sent with this Report to all those Governors and Members who have expressed a wish to have the volume.

84. OTHER MEMBERS WHO DESIRE TO HAVE THIS WORK SHOULD MAKE EARLY APPLICATION FOR IT TO THE SECRETARY. The book, which is published by John Murray, 50a Albemarle Street, London, W., is free to Governors and Members, and is obtainable by non-members at 1s. 3d. post free. The price of the two earlier volumes, copies of which are still available, was 2s. 6d. each.

Medal for Research.

85. A Silver Medal and money or books to the value of £10 were again offered by the Research Committee this year for a monograph or essay giving evidence of original research on the part of the candidate on any agricultural subject, on any of the cognate agricultural sciences, or on agricultural economics. Candidates must reside in Great Britain or Ireland, and must not be more than 30 years of age. The last date for receiving monographs or essays was October 31.

Electricity Supply in Rural Areas.

86. In the autumn of 1927 the Council appointed Mr. Dampier Whetham to represent them at a Conference called by the Electricity Commissioners to consider the problem of electric

supply in rural areas. He has now presented the following Report:—

The full Conference met three times, and two Sub-Committees, appointed to consider (1) the nature and extent of the demand, and (2) the price of supply and cost of equipment, met five and seven times respectively.

Both Sub-Committees had much evidence put before them, and the Report of the Conference, published by H.M. Stationery Office (1s. net), embodying the Reports of the Sub-Committees, may be taken as a useful summary of the conclusions which may be drawn from the facts at present known.

At the first meeting of the Conference, a general consensus of opinion became manifest that, if rural electrification was to make much progress, a relaxation was necessary in the regulations for the construction of overhead lines, which cost about £600 a mile in England compared with £200 or £300 in some other countries. The Electricity Commissioners, who already had this matter under consideration, announced concessions at the second meeting of the Conference, and a new code was published on April 16th, 1928. It seems probable that under this code the cost may be reduced to somewhere about £400 a mile—a substantial saving: The Conference, at its third meeting, recommended still further consideration of possible relaxations.

The Report of Sub-Committee No. 1, over which Sir Douglas Newton presided, contains evidence about the present and the potential demand for electric current. For instance, the rural area served by the Chester Corporation from 1925 to 1928 showed a rise in the number of consumers from 318 to 1,188, and in the units consumed per head of the rural population from 7.3 to 48.9. The Committee estimates that, in rural areas surrounding towns, the consumption might reach 60 units per head in three or four years under a progressive policy, while, in the next surrounding belts of purely rural territory, 30 or 40 units per head might be used. In more sparsely populated and remote areas, a public supply of electricity is not likely to be remunerative, at any rate for many years to come.

These figures represent the probable demand from *all* country consumers. As regards the purely agricultural demand, the Chester figures show that 106 farms took an average of 1,706 units per farm in the fourth year of supply, three-quarters of this amount being accounted for by lighting and by the domestic requirements of the farm-houses, comparatively little use being made of electricity for power. On the other hand, in specially favourable cases studied by Dr. Owen in various parts of the country, the consumption per farm rose to figures varying from 4,000 to 14,000 units per annum.

Sub-Committee No. 2, Chairman Mr. J. T. H. Legge, considers that in areas surrounding towns, where the annual consumption might reach 60 units per head of population, the charges should not exceed 8d. per unit for lighting, 2d. (decreasing according to consumption to 1d.) for heating, and 2½d. to 1½d. for power. In the next belt of territory, with a probable consumption of 30 units per head, the rates should not exceed 9d. to 10d. for lighting, and 3d. to 4d. for other purposes. But the Committee recommend the general adoption of a two-part tariff, by which there is a fixed or service charge, and in addition a charge for each unit consumed. They think that the fixed charge should be adjusted so that the additional charge should not be more than 1d. or 1½d. a unit.

At the third meeting of the Conference on June 26, the Reports of the Sub-Committees were generally approved, and thirteen definite recommendations based on those Reports adopted or made with the

object of furthering rural electrification. The Electricity Commissioners are asked to pay special attention to country areas, to reconsider the code of overhead line regulations, to stimulate Local Authorities and Companies undertaking the supply of electricity in various specified ways, to publish annual Reports with statistics of progress, to urge on undertakers greater uniformity in charges, to invite the Electrical Industry to help in devising a scheme for financial assistance in wiring and in hiring apparatus, and in arranging for an annual meeting of Managers and Engineers of electric supply undertakings.

The Electricity Commissioners stated their intention of calling the Conference together again in twelve months' time to review the position again.

Bye-Laws.

87. As stated in the last year's Report, the Council then had under consideration the amendment of the Bye-laws relating to the procedure to be adopted for the dismissal of a Member from the Society. The new Bye-law was enacted by the Council on April 4, and is as follows:—

Bye-law 16 (A).—Any Governor or Member (including an Honorary Foreign or Corresponding Member) who shall fail in the observance of any rule, regulation or bye-law of the Society, or shall conduct himself in a manner derogatory to or unworthy of the character of the Society or prejudicial to its interests, may be removed from the Society in the following manner:—

Any complaint or allegation relating to any of the matters aforesaid against such Governor or Member (in this Bye-law hereinafter called "the said Member") may be brought to the notice of the Council by any Committee.

The Council may thereupon refer the complaint or allegation either to some standing Committee or to a special Committee.

Such Committee shall as soon as practicable appoint a place and time for the consideration of the complaint or allegation. The said Member shall be informed in writing of the nature of the complaint or allegation against him, and shall be invited to attend in person before the Committee at the appointed place and time.

All the facts, documents and evidence in support of or in reply to the complaint or allegation shall be placed before the Committee, who shall generally arrange the procedure and conduct of the matter as they shall think proper.

The Committee shall as soon as practicable prepare and present to the Council a report summarising the matter and the evidence adduced, and shall state their findings upon such evidence and whether or not they recommend the removal of the said Member from the Society.

A copy of such report shall be sent to the said Member by registered post not less than seven days before it is presented to the Council.

If the report shall recommend the removal of the said Member, and if the Council shall by a vote of at least two-thirds of the members of the Council present and voting adopt the said report, then the said Member shall, *ipso facto*, be removed from being a Governor or Member of the Society; but he shall remain liable for any arrears of subscription or other sums due from him, and shall not be entitled to the return of any subscription or life composition already paid.

The said Member shall not be at liberty to retire from the Society between the dates of the first communication to the Council of the complaint or allegation and the final decision of the Council on the report of the Committee.

Any member of the Council who shall be a member of the Committee and attend the inquiry shall not be entitled to vote upon the report at any meeting of the Council, and if by inadvertence or otherwise he shall so vote his vote shall not be counted.

Written notice of the ultimate decision of the Council shall be given to the said Member as soon as practicable.

(B).—Any Governor or Member who shall have been expelled from any agricultural or breed society for conduct derogatory to or unworthy of the character of such society or prejudicial to its interests or objects shall, on the fact being brought to the notice of the Council, be removed from being a Governor or Member by a resolution to that effect passed by the Council; but such Governor or Member shall remain liable for any arrears of subscriptions or other sums due from him, and shall not be entitled to the return of any subscription or life composition already paid.

The fact that any Governor or Member has been expelled from any agricultural or breed society shall be sufficiently evidenced for the purpose of this Bye-law by a certificate to that effect from the secretary or some other official of such agricultural or breed society.

Representation on other Bodies.

88. Lord Hastings has been appointed, vice Sir Douglas Newton, resigned, as the Society's representative on the Council of the National Institute of Agricultural Botany. Mr. T. B. Turner has been appointed as a Member of the Registration Committee of the Worshipful Company of Farriers. Captain Denis Wigan, who has been co-opted as a Member of the Society's Research Committee, has been appointed, with Mr. Fred Smith, to represent them on the Governing Body of the Norfolk Agricultural Station. Lord Mildmay of Flete has been appointed, vice Sir William Somerville, resigned, as the Society's representative on the Council of the Lister Institute of Preventive Medicine.

"Queen Victoria Gifts."

89. The Trustees of the "Queen Victoria Gifts Fund," by utilising an accumulated balance, have been able this year to make a grant of £300 to the Royal Agricultural Benevolent Institution. The money is to be devoted to eight gifts of £10 each to male candidates, seven gifts of £20 each to married couples, and eight gifts of £10 each to female candidates, the actual distribution in each class to be left until after the election to pensions by the Institution. This represents the largest grant made for the past twenty-one years. For nineteen years prior to 1926 the grant made was £140 a year, and for 1926 and 1927 £180 a year.

Medals for Cattle Pathology.

90. In the examination held at the Royal Veterinary College this year for the Society's Prizes for Cattle Pathology, the Silver Medal was gained by Mr. J. S. Steward, of Gwynne House, Hereford, and the Bronze Medal by Mr. J. S. Stevenson, of Oriel House, Norwich Street, East Dereham.

National Diploma in Agriculture.

91. Fifty-nine candidates were successful in gaining the National Diploma in Agriculture at the Twenty-ninth annual examination held by the National Agricultural Examination Board at the University of Leeds in April last. See list on pages 285 and 286.

National Diploma in Dairying.

92. The Thirty-third annual examination for the National Diploma in Dairying was held, under a new syllabus and revised regulations, in September, at the University and British Dairy Institute, Reading, for English students, and at the Dairy School for Scotland, Kilmarnock, for Scottish students. Forty-three candidates were examined at the English Centre, of whom twenty-four were awarded the Diploma; and forty-two presented themselves at the Scottish Centre, of whom twenty-one gained the Diploma. The *Honours* standard was attained by one student at each Centre. The names of the Diploma winners will be found on pages 288 and 289.

Amalgamation of Dairy Examinations.

93. As the result of a conference between representatives of the National Agricultural Examination Board and of the British Dairy Farmers' Association, it has been decided to amalgamate the N.D.D. and the B.D.F.A. Dairy Diploma Examinations. The joint Examination will in future be conducted by a newly-constituted body to be known as the "National Dairy Examination Board," on which the Royal Agricultural Society of England, the Highland and Agricultural Society of Scotland, and the British Dairy Farmers' Association will have equal representation. The Diploma will continue to be the "National Diploma in Dairying," and the expenses of the new Board will be shared equally by the three Societies concerned.

German Agricultural Society.

94. The Council have now resumed the friendly relations with the German Agricultural Society which were broken off in August, 1914.

By Order of the Council,
T. B. TURNER,
Secretary.

16 Bedford Square,
London, W.C.1.
November, 1928.

NATIONAL AGRICULTURAL EXAMINATION BOARD.

I.—REPORT ON THE RESULTS OF THE TWENTY-NINTH EXAMINATION FOR THE NATIONAL DIPLOMA IN AGRICULTURE.

HELD AT LEEDS, APRIL 11 TO 18, 1928.

1. The Twenty-ninth Examination for the NATIONAL DIPLOMA IN AGRICULTURE was, by the courtesy of the authorities, held at the University of Leeds, from the 11th to the 18th April last.

2. The subjects of Examination were Practical Agriculture (two papers), Farm Machinery and Implements, Land Surveying and Farm Buildings, Agricultural Chemistry, Agricultural Botany, Agricultural Book-keeping, Agricultural Zoology, and Veterinary Science and Hygiene. The whole nine papers could be taken at one time, or a group of any three, four or five in one year and the remaining group at one examination within the next two years. Candidates taking the whole Examination in one year who failed in not more than three subjects, and candidates taking a second group who failed in not more than two subjects, were allowed to appear again for those subjects only next year. Candidates failing in one or two subjects of a first group of not less than four, or in a single subject of a group of three, were permitted to take those subjects again in conjunction with the second group.

All candidates, before sitting for the Practical Agriculture and Farm Machinery and Implements papers, had to produce evidence of possessing a practical knowledge of Agriculture obtained by residence on a farm for a period or periods (not more than two) covering a complete year of farming operations.

3. The Examiners in the different subjects were :

PRACTICAL AGRICULTURE. (First Paper, 400 Marks. Second Paper, 400 Marks.) A. W. Oldershaw, M.B.E., B.Sc., N.D.A., Prof. J. A. S. Watson, M.C., B.Sc., M.S.A. (Iowa), and William Bruce, M.A., B.Sc.; FARM MACHINERY AND IMPLEMENTS. (300 Marks.) J. R. Bond, M.B.E., M.Sc., N.D.A. (Hons.); LAND SURVEYING AND FARM BUILDINGS. (100 Marks.) Edward Walford, F.S.I.; AGRICULTURAL CHEMISTRY. (200 Marks.) J. F. Tocher, D.Sc., F.I.C.; AGRICULTURAL BOTANY. (200 Marks.) Prof. John Percival, M.A., Sc.D.; AGRICULTURAL BOOK-KEEPING. (200 Marks.) Arthur G. Ruston, B.A., D.Sc.; AGRICULTURAL ZOOLOGY. (100 Marks.) R. Stewart MacDougall, M.A., D.Sc.; and VETERINARY SCIENCE AND HYGIENE. (200 Marks.) A. C. Duncan, F.R.C.V.S.

4. One hundred and fifty-five candidates presented themselves, as compared with 142 last year. Nine candidates took

the whole Examination, 75 who had previously passed in certain subjects appeared for the remaining portion, and the other 71 candidates came up for a first group of subjects.

5. Fifty-nine candidates were successful in obtaining the Diploma, the first four reaching the Honours standard. The names of the ordinary Diploma-winners are in alphabetical order.

DIPLOMA WITH HONOURS.

- 1st, CHARLES TURNER, West of Scotland Agricultural College, Glasgow.
- 2nd, EVELYN HOYLE BRANT, South Eastern Agricultural College, Wye, Kent.
- 3rd, LOUIS HENRY MANNING, Harper Adams Agricultural College, Newport, Salop.
- 4th, WILLIAM EDMUND GELLING, University of Leeds.

DIPLOMA.

- CHRISTOPHER STEVENS ALLEN, Seale Hayne Agricultural College, Newton Abbot.
- GEORGE THOMAS BALFOUR, South Eastern Agricultural College.
- STANLEY FRANK BARNES, University College of Wales, Aberystwyth.
- EDGAR ALFRED BARTLETT, South Eastern Agricultural College.
- CHARLES EDWARD BLAND, University of Reading.
- CLIFFORD BOSOMWORTH, University of Leeds.
- VICTOR BRIGGS, University of Leeds.
- JAMES CLARK BROWNLIE, West of Scotland Agricultural College.
- GEORGE WARWICK CHANNON, University of Reading.
- ERNEST MARTIN CLARK, East Anglian Institute of Agriculture, Chelmsford.
- DUNCAN CYRIL CLARKE, Midland Agricultural and Dairy College, Sutton Bonington.
- JOHN GRANT COOPER, University of Leeds.
- JOHN CROZIER, Glasgow University and West of Scotland Agricultural College.
- JOHN REGINALD CURRY, Armstrong College, Newcastle-on-Tyne.
- ROBERT PATON DAVIDSON, Edinburgh University and East of Scotland College of Agriculture.
- EDWARD DAVIES, University College of Wales, Aberystwyth.
- ALBERT IVOR GORDON DAY, University of Reading.
- URSULA ESMONDE DOWSE, Harper Adams Agricultural College.
- HAROLD CECIL FREETH, University of Reading.
- LESLIE FREDERICK GREGORY, University College of Wales, Aberystwyth.
- GORDON GEORGE HAYES, East Anglian Institute of Agriculture.
- JOHNSTON BOYD HENDERSON, West of Scotland Agricultural College.
- WILLIAM ALFRED JOHNSON, Harper Adams Agricultural College.
- HENRY FRASER NAISMITH JOHNSTON, West of Scotland Agricultural College.
- JOHN PHILLIPS JONES, University College of Wales, Aberystwyth.
- KEITH BEN KILBURN, University of Leeds.
- GEOFFREY LE MESURIER LAVERS, Seale Hayne Agricultural College.
- IDRIS GILES LEWIS, University College of Wales, Aberystwyth.
- JOHN LOCKHART, West of Scotland Agricultural College.
- JAMES JOHN MACGREGOR, Glasgow University and West of Scotland Agricultural College.
- NEIL McNAB, West of Scotland Agricultural College.
- ANTHONY JOHN MARVAL, East Anglian Institute of Agriculture.

HORACE LESLIE GRAHAM MILNE, Harper Adams Agricultural College.
 ARTHUR BATEMAN MOORE, Midland Agricultural and Dairy College.
 HENRY IAN MOORE, University of Leeds.
 WINFELD MOULDS, University of Leeds.
 JOHN FREDERICK OXENHAM, Seale Hayne Agricultural College.
 W. R. PENMAN, Harper Adams Agricultural College.
 HARRY JAMES WILLIAM POWELL, South Eastern Agricultural College.
 WILLIAM RICHARD BRYANT QUICK, Seale Hayne Agricultural College.
 THOMAS ROBINSON, University of Leeds.
 GILBERT McMICKING RODDAN, Glasgow University and West of Scotland Agricultural College.
 WILLIAM T. ROWE, Seale Hayne Agricultural College.
 RALPH NEWMAN SADLER, East Anglian Institute of Agriculture.
 CLIFFORD RUNDLE SELDON, Seale Hayne Agricultural College.
 SIDNEY DOUGLAS SMITH, University of Leeds.
 CECIL ROBERT HICKLING STURGESS, Midland Agricultural and Dairy College.
 WILLIAM HENRY SUTTON, Seale Hayne Agricultural College.
 NOEL LEA TINLEY, South Eastern Agricultural College.
 LEONARD CUNDELL TRUMPER, University of Reading.
 BERNARD HENRY WALKER, East Anglian Institute of Agriculture.
 IAN POLLOCK WATSON, West of Scotland Agricultural College.
 JOHN MCADAM WATSON, West of Scotland Agricultural College.
 GEORGE WELLS, University of Reading.
 JOSEPH CHRISTOPHER WHEATLEY, Midland Agricultural and Dairy College.

6. One of the candidates appearing for the whole Examination failed in three subjects, and fifteen of those taking a second group of subjects failed in not more than two. These will be permitted next year to take again the subjects in which they failed.

7. Of the 71 candidates appearing for a first group of subjects, the following 35 succeeded in passing, and will therefore be permitted, subject to the Regulations, to take the second group in 1929 or 1930 :

ANNE CATHERINE ANDERSON, Edinburgh and East of Scotland College of Agriculture.
 ANDREW NOBLE BLACK, Glasgow University and West of Scotland Agricultural College.
 FREDA WRIGHT BROOKS, University of Reading.
 JAMES AFFLECK BROWN, Jun., West of Scotland Agricultural College.
 JAMES TERTIUS CRAIG, West of Scotland Agricultural College.
 CYRIL DANIEL, Seale Hayne Agricultural College.
 DAVID THOMAS DAVIES, University College of Wales, Aberystwyth.
 EVAN DAVIES, University College of Wales, Aberystwyth.
 JOSEPH EDWARDS, Glasgow University and West of Scotland Agricultural College.
 JOHN WILLIAM EGDELL, Armstrong College, Newcastle-on-Tyne.
 JOSIAH GUNSTON, East Anglian Institute of Agriculture.
 WILLIAM EDWARD HEATH, Midland Agricultural and Dairy College.
 DONALD STEWART HENDRIE, Glasgow University and West of Scotland Agricultural College.
 HENRY HIRST, University of Leeds.
 ERIC LEONARD JONES, University College of Wales, Aberystwyth.
 HOWELL WILLIAM JONES, University College of North Wales, Bangor.

THOMAS HETHERINGTON LUNSON, Armstrong College.
 HENRY MONTGOMERY, JUN., West of Scotland Agricultural College.
 JAMES SAXON NORMAN, Harper Adams Agricultural College.
 JOHN RICHARD OWEN, University College of North Wales, Bangor.
 ROBERT RENDALL POTTINGER, Harper Adams Agricultural College.
 DUNCAN CAMERON ROBERTSON, West of Scotland Agricultural College.
 JAMES ENGLEBERT ROWE, University of Reading.
 HAROLD BENJAMIN SALTER, Seale Hayne Agricultural College.
 ALFRED JAMES EDWARD SANDERS, Seale Hayne Agricultural College.
 PHILIP HENRY SMITH, University of Leeds.
 LOUISA MARY STANGER, Midland Agricultural and Dairy College.
 LESLIE ROGER SWINDELLS, Harper Adams Agricultural College.
 SYDNEY PEARCE THOMAS, Seale Hayne Agricultural College.
 LEONARD TROTTER, South Eastern Agricultural College.
 THOMAS LESLIE VONDY, University of Leeds.
 STEPHEN HENRY WEBSTER, West of Scotland Agricultural College.
 ELLIS EVANS WILLIAMS, University College of North Wales, Bangor.
 THOMAS WINTER, Armstrong College.
 DUDLEY CALVERT WITHERS, University of Leeds.

8. Twenty-nine of the unsuccessful candidates sitting for a first group failed in one or two subjects, which they will be allowed to take again in conjunction with the second group.

9. The thanks of the Board are again due to the authorities of the University of Leeds, for their liberality and courtesy in placing the Great Hall and other rooms of the University at the Board's disposal for the Examination; and to the Examiners, for the care and attention they bestowed upon the written answers to the papers set, and upon the *viva-voce* examination

C. H. BROCKLEBANK,
Chairman.

16 Bedford Square, London, W.C.1.
 May, 1928.

II.—REPORT ON THE RESULTS OF THE THIRTY-THIRD EXAMINATION FOR THE NATIONAL DIPLOMA IN DAIRYING, 1928.

1. The Thirty-third Annual Examination for the National Diploma in Dairying was, by the courtesy of the Authorities, held during September at The University and British Dairy Institute, Reading, for English students, and at the Dairy School for Scotland, Kilmarnock, for Scottish students.

2. A new Syllabus with revised Regulations, of which due notice had been given, came into operation this year. As a preliminary to the acceptance of an application for permission to enter for the Examination, a candidate was required to produce:—(1) A certificate testifying that he or she had attended a Diploma Course in the subjects of the Examination covering *two academic years* at an approved Dairy Training Institution;

(2) Evidence that he or she had spent at least six months on an approved Dairy farm and taken part in the work.

A candidate who had already taken a Degree in Agriculture of a British University or a Diploma in Agriculture recognised by the Board, was allowed to enter for the Examination after one year's training at a recognised institution, providing that such course included at least six months' training in practical dairy work, and that he or she had worked for at least six months on an approved Dairy Farm.

3. The written Examination included papers on Dairy Farming, Dairy Hygiene, Principles of Dairying, Dairy Factory Management and Dairy Engineering, Chemistry and Physics, Dairy Bacteriology, and Dairy Bookkeeping. The Practical Examination comprised Hard-pressed, Blue-veined, and Soft Cheese-making, and Butter-making.

4. At both Centres the same papers of Questions were answered by the candidates from September 6 to 8. The Practical Examination as well as the *viva voce* was conducted at the English Centre from September 10 to 13, and at the Scottish Centre from September 17 to 22.

5. Forty-three candidates presented themselves at the English Centre, of whom twenty-four were successful in passing, one candidate reaching "Honours" standard. The names of the Diploma winners are in alphabetical order.

ENGLISH CENTRE.

Diploma with Honours.

ALICE P. HASSALL, The University and British Dairy Institute, Reading.

Diploma.

LILIAN ABBOTTS, The University and British Dairy Institute, Reading.
BETH CLARE BEAMOND, The University and British Dairy Institute, Reading.

NANCY COCKBURN BUTCHART, Lancashire County Council Dairy School, Hutton, Preston.

REGINALD WILLIAM CHAMPION, The University and British Dairy Institute, Reading.

WILLIAM ERNEST CYRIL CLOOK, The University and British Dairy Institute, Reading.

MARY CURZON, Midland Agricultural and Dairy College, Sutton Bonington.

ALBERT IVOR GORDON DAY, The University and British Dairy Institute, Reading.

MARJORIE FLEET, The University and British Dairy Institute, Reading.

HAROLD CECIL FREETH, The University and British Dairy Institute, Reading.

JOSEPH HETHERINGTON, The University and British Dairy Institute, Reading.

EDWIN HUMPHREY HINTON, East Anglian Institute of Agriculture, Chelmsford.

MARGARET LUTA HOPSON, The University and British Dairy Institute, Reading.

ELIZABETH EMILY JONES, University College of Wales, Aberystwyth,
EDITH MARY LLOYD, The University and British Dairy Institute, Reading.

PHYLLIS MARY PARROTT, East Anglian Institute of Agriculture, Chelmsford.

UNA AGATHA RIDGWAY, Studley College, Warwickshire.

GLADYS EUGENIE ROBERTS, The University and British Dairy Institute, Reading.

ALICE ROTHWELL, Lancashire County Council Dairy School, Hutton, Preston.

ELINOR SIMON, The University and British Dairy Institute, Reading.

NORAH PATRICIA SLATTERY, The University and British Dairy Institute, Reading.

ELSIE WATERS, The University and British Dairy Institute, Reading.

GEORGE WELLS, The University and British Dairy Institute, Reading.

MARY WILD, Midland Agricultural and Dairy College, Sutton Bonington.

6. Forty-two candidates presented themselves at the Scottish Centre, of whom twenty-one were successful, one reaching the "Honours" standard.

SCOTTISH CENTRE.

Diploma with Honours.

MARY MACFARLANE STEWART, St. Helens, Forfar.

Diploma.

ANNE CATHERINE ANDERSON, 49 Morningside Park, Edinburgh.

WILLIAM WIGHTON BALLARDIE, 58 Fern Avenue, Jesmond, Newcastle-on-Tyne.

MARY MITLER CAMPBELL, 17 Nelson Street, Falkirk.

ABDUL KARIM BAWA CAZI, 11 George Square, Edinburgh.

JEREMIAH DOHERTY, Kilegorive, Cappamore, Co. Limerick.

CAROLINE ELIZABETH GUNSON, 30 Randolph Road, Glasgow, W.I.

ANDREW KING KIRK, Fullerton, Canal Avenue, Johnstone, Renfrewshire.

ELIZA GEORGINA MACKAY, Trantlemore, Forsinard, Sutherland.

ISABELLA CATTO MEIKLE, 10 Townhead Street, Old Cumnock, Ayrshire.

ESTHER SHEARER MOFFAT, The Mount, Balfon, Stirlingshire.

WILLIAM RICHARD BRYANT QUICK, Seale Hayne Agricultural College, Newton Abbot, Devon.

CLIFFORD RUNDLE SELDON, Grampound, Cornwall.

HESTERINA SIMPSON, Woodend, Ballygrant, Isle of Islay.

MARGARET LAW SMALL, 130 Roxburgh Circus, Cardonald, Glasgow, S.W.2.

JOHN RUSSELL STEWART, 29 Knowetop Street, Maryhill, Glasgow.

THOMAS R. STODART, Northflatt, Thankerton.

WILLIAM HENRY SUTTON, Treskinnick, Poundstock, Bude, Cornwall.

CHARLES TURNER, 9 Argyll Avenue, Stirling.

THOMAS WILLIAMSON, "Routen," Ennerdale, Frizington, Cumberland.

JEAN GOLDIE WILSON, 17 South Dean Road, Kilmarnock.

All the candidates at the Scottish Centre had been students at the Kilmarnock Dairy School.

7. The Examiners at both Centres were: Alex. F. Smith, N.D.A., N.D.D., C.D.D. (Dairy Farming, Dairy Hygiene, and Practical Butter-making); William Lawson, M.B.E., N.D.A. (Hons.), C.D.A. (Glas.), N.D.D. (Principles of Dairying, Dairy Factory Management and Dairy Engineering, and Practical Cheese-making); Dr. S. Allinson Woodhead, F.I.C. (Chemistry and Physics, and Dairy Bacteriology); James Wyllie, B.Sc., N.D.A. (Hons.), N.D.D. (Dairy Bookkeeping).

C. H. BROCKLEBANK, *Chairman.*

T. B. TURNER, *Secretary.*

16 Bedford Square, London, W.C.1.

October, 1928.

ANNUAL REPORT FOR 1928 OF THE PRINCIPAL OF THE ROYAL VETERINARY COLLEGE.

GLANDERS.

THE year 1928 has been fortunate in not having had any very severe outbreaks of contagious disease amongst animals; as, although glanders again figures in the schedule, there was only one case, which was detected in the Southampton area and confined to the horse affected. This emphasises the value of the present regulations of the Ministry of Agriculture and is a tribute to the efficiency and capability of the Veterinary Department and its officials. It shows, too, that even when a disease has been eradicated, there is still necessity for a continuation of the utmost vigilance; and that on no account should there be any laxity, either in the completeness of the regulations themselves or the methods of their administration. In the case of the particular disease instanced here, the Glanders Order of 1908 covers all risk, and both the Agricultural Community and the General Public can rest content that this ailment will never again gain a footing in Great Britain.

By the following table it will be seen that since 1921, when there were 11 outbreaks and 42 animals attacked, the numbers have steadily declined, and that the year 1927 was free from this disease altogether:—

Year	Outbreaks	No. of Horses affected
1921	11	42
1922	4	4
1923	8	13
1924	2	3
1925	2	2
1926	1	1
1927	Nil	Nil
1928	1	1

PARASITIC MANGE IN HORSES.

Parasitic Mange in the horse is still steadily on the decline, as in 1928 there were only approximately 260 outbreaks with 544 animals attacked, whilst in 1919 there were reported no less than 5,003 outbreaks with 9,773 animals infected.

ANTHRAX.

Anthrax is still a source of anxiety to the owner and breeder of cattle, and during 1928 536 outbreaks have been confirmed with 618 animals infected. The chief sources of infection in this country are, as previously stated, due to the importation of cattle-feeding material and bone manure. It has not yet been found possible to thoroughly disinfect either of these satisfactorily, so that the risk still remains for all purchasers of these commodities who breed or rear stock. There is, however, nothing to cause serious alarm. The following table illustrates the incidence of confirmed outbreaks of Anthrax during the past six years :—

Year	Outbreaks
1923	724
1924	734
1925	677
1926	706
1927	430
1928	533

FOOT AND MOUTH DISEASE.

Foot and Mouth Disease still remains on the list and is the one ailment which gives the Ministry Officials the most cause for anxiety. That we still "hold our own" is shown by a comparison between the numbers of outbreaks which have occurred during the past twelve months in Great Britain and 4 of the chief countries of Europe :—

Month	Great Britain	France	Germany	Holland	Belgium
January	53	209	1,521	28	3
February	25	376	1,082	83	14
March	9	535	1,199	736	35
April	4	234	949	737	32
May	11	309	1,126	1,120	23
June	0	317	1,515	1,466	34
July	3	965	2,267	2,147	22
August	2	1,444	2,599	3,497	11
September	6	1,860	2,196	4,488	34
October	7	2,633	3,759	4,150	21
November	13	1,538	4,297	1,017	22
December	5	— ¹	— ¹	— ¹	— ¹

¹ These figures are not yet available.

As in previous years the slaughter policy is still adopted, and there is no doubt but that other countries envy the position we are able to take, both morally and financially, in our method of dealing with this disease.

TUBERCULOSIS.

Although the new Tuberculosis Order occasionally receives severe criticism, particularly on the ground that its powers do not extend far enough, there can be no question but that its enforcement has done a considerable amount of good; even if it has only protected the unsuspecting purchaser from the unscrupulous vendor, who used to be able to openly expose his advanced tuberculous cattle for sale in the open market. It has also helped to rivet the attention of the General Public, as well as the dairyman and farmer, on this disease as it affects the cow, and one can hardly expect such a miracle as its entire eradication, from even the dairy cattle, to be effected within a short space of years. Between January 1 and October 1 of 1928 some 12,946 tuberculous cattle have been destroyed, the respective numbers for the 12 months of 1927 having been 17,281.

SHEEP SCAB.

During the twelve months ending December 31, 1928, there have been approximately 669 outbreaks. The following table shows the fluctuation of numbers during the past five years :—

Year	Outbreaks
1923	646
1924	575
1925	664
1926	707
1927	752
1928	669

SWINE FEVER.

As stated in the previous report the responsibility for eradication of an outbreak in a large herd by complete slaughter methods rests with the decision of the owner, as it is not now made compulsory by the Government. The latter do, however, still rigidly control the question of movement of infected pigs, and in that respect one feels sure they will continue firm.

Year	Outbreaks
1923	1,968
1924	1,441
1925	1,632
1926	1,207
1927	1,784
1928	1,466

In the above table one sees at a glance the position of affairs for the twelve months ending December 31, 1928, in comparison with the five preceding years.

FREDERICK T. G. HOBDAY.

Royal Veterinary College,
London, N.W.1.

ANNUAL REPORT FOR 1928 OF THE CONSULTING CHEMIST.

THE past twelve months have shown a considerable falling-off in the number of samples sent by Members for analysis, these having been 242 only as against the 291 of 1927. This, for a Society numbering 12,000 members, is a very inadequate representation, and, in view of the advantages which are provided at quite low rates, one can hardly refrain from the conclusion that the bulk of members engaged in actual farming practice either do not trouble to have their purchases checked by analysis, or that, if they require analyses, they prefer to make use—at least for their ordinary transactions—of other, and mainly local, facilities for getting such analyses made.

Nevertheless, the record of work done from year to year shows that, in cases of difficulty, recourse is generally had to the Society's laboratory. The reports issued from time to time from the Chemical Committee give evidence of this, and supply useful information on current matters of a chemical nature.

In addition to samples sent by members, there were 19 samples of Cider analysed in connection with the awards at the Nottingham Show of the Society.

A comparison of the list of samples with that of 1927 will show that there has been apparently a falling-off in the use of linseed, cotton and other cakes, with an increase in compound cakes and meals. These latter have largely taken the form of foods compounded to meet special requirements, amongst which figure largely those for Dairy Cattle. The increasing use of such compound foods has, no doubt, been brought about also largely by the improved methods which manufacturers have adopted in turning them out in convenient form for use, such, *e.g.*, as cakelettes, cubes, nuts, &c., thus rendering their employment more easy than when large cakes have to be sent loose by rail and then broken up or put through a mill on the farm.

A pleasing feature has been the number of samples of Water and of Soils submitted, emphasising that where more than a mere analytical statement is required, and an expert opinion has to be given, the opportunities for obtaining such are appreciated.

It has to be recorded that, taken as a whole, the supply of both fertilisers and feeding-stuffs has been of a satisfactory nature, and instances of misrepresentations, still less of fraud, have been but few. This is not to imply, however, that there is no "call" for having one's purchases checked by analysis, however good may be the firms supplying these. Undoubtedly at a time when, as now, farming is in a far from prosperous condition, the tendency is to save even the expense of an analysis, though instance after instance could readily be given to show that this is, in the end, false economy.

The past year has seen the advent of practically nothing new either in fertilisers or in feeding-stuffs. Ground Mineral phosphates continue in favour, and Basic Slag, though no longer of the high quality of former years, retains its popularity. More attention has been given to the use of Lime in different forms, and, were it only possible to make the supply of this more accessible and at lower cost, much of the farming land of the country would be greatly benefited.

Among feeding materials, Cereal meals and offals appear to have an increasing use, and largely to the exclusion of cakes such as Linseed and Cotton. Dried Sugar Beet Pulp, mentioned in last year's report as practically a new product, has also been utilised to a considerable extent.

On the other hand, one does not hear so much of fancy foods—condiments, and the like, many of which are sold at exorbitant prices, on the ground of their possessing certain special virtues. The warnings given on this point would appear to have borne fruit.

At the same time there are certain ingredients of foods to the use of which attention has quite properly been drawn of late,

such, for example, are :—"minerals" in food mixtures, Iodine and other unusual constituents, besides the now familiar Vitamines. Such subjects form, very rightly, a part of experimental enquiry, and on which stations such as the Rowett Research Institute, Aberdeen, the School of Agriculture, Cambridge, the National Institute for Research in Dairying, Reading, and other places are engaged. Up to the present our knowledge of these subjects is of only a limited nature, but, no doubt, valuable information for the benefit of feeders of stock will be, in time, accumulated.

The occasional presence of Castor-oil bean in feeding cakes and meals is still reported, and, though there is clear evidence that merchants now take much more care than formerly to guard against the occurrence of this poisonous seed in the materials they purchase from abroad, it is almost impossible to provide entirely against its recurrence now and again. In one case that came under my notice a purchaser of "compound cubes" had been feeding his cows on these for a matter of two months, during which time nothing amiss had been noticed. Then, suddenly, several cows were taken ill, and the veterinary surgeon, on being called in, reported that they showed signs of being poisoned. The cake was promptly stopped and the animals all eventually recovered. A sample, however, of what they were having, when taken ill, was sent me, and in this I found quite a considerable amount of castor-oil bean. This instance illustrates well the difficulty attending the variable distribution of such seed in what may constitute a purchase. It may quite well happen that the great bulk is free of castor, but that some bags or some cakes, or even a single cake or single bag has enough castor-oil bean in it to cause actual death of the particular animal or animals eating it. Thus there is always some uncertainty in testing such a delivery, and any quantitative estimate of the castor present is practically devoid of value, because of the unequal distribution throughout the bulk. If the whole had been thoroughly ground and mixed up, a quantitative statement would have value, but, as the case stands, this is not so, for some parts of a delivery may be, as the above instance indicates, free of castor, and another part have quite a material amount present. For this reason I make it a practice not to state the result of an examination in quantitative terms, as this would only be misleading.

Another material with which dangerous properties have been associated is the husk of the cacao-bean, and there is evidence of this acting injuriously in the case of horses. The cacao-bean husk contains an alkaloid—*theobromine*—similar to that found in Tea and Coffee—and this may give rise to trouble in the feeding of stock. Though the evidence is not fully clear as regards all

classes of stock, it would certainly seem advisable to avoid the presence of this husk in feeding cakes, meals, &c.

There has been no alteration since September, 1926, in the generally accepted Scales for assessing the Unexhausted Manurial Values of Feeding-Stuffs and Fertilisers, but, inasmuch as the market price of nitrogenous salts such as Sulphate of Ammonia and Nitrate of Soda has, in the face of competition (chiefly from abroad), undergone some lowering, and as this seems to be of more than a passing nature, I have in mind shortly to revise the Tables, in regard to Feeding Stuffs, by giving a somewhat lower value to the unit of Nitrogen. This will, when introduced, be duly notified by the Central Association of Agricultural Valuers.

The outstanding event of the year in regard to the work of the Chemical Committee is the coming into force, on July 1, 1928, of the Fertilisers and Feeding Stuffs Act, 1926, together with the Regulations affecting the working of the Act. The Act itself, as is well known, was passed early in 1927, but it was necessary to draw up the different Regulations regarding procedure, methods of marking and sampling, methods of analysis, the fixing of limits of variation, the form of certificates, &c. This engaged for some time the attention of different Committees on which the various interests, whether of agriculture, the trade, or chemical science, were represented, and care was taken to elicit the opinion of the leading agricultural societies and organisations as well as that of the different sections of the Trade concerned, on the proposed changes. Here, again, but little difficulty was shown and the Regulations duly passed into law.

As I have commented, in previous reports, on the main provisions of the Act, it is unnecessary to refer to them again here, beyond pointing out that the main advantages of the new over the old Act consist in the separation of Civil and Criminal proceedings and in the extension of the time limit of 10 days (for the taking of samples) to 14 days without any notice of intention to sample being necessary.

Under the Civil clauses of the Act a farmer wishing to have an analysis of a purchase has 14 days' liberty given him, during which he can ask the official sampler to come and take a sample; he gets the analysis sent him; if this shows the delivery to be up to guarantee, there is an end of the matter; if, on the other hand, the analysis shows some deficiency, he is able to claim for this, and the matter is one for adjustment between vendor and purchaser mutually without any question of legal proceedings or penalties. When, on the other hand, it is found necessary to take proceedings for the punishment of adulteration, fraud, or misrepresentation, this can only be done under the criminal clauses of the Act and upon a sample taken on the vendor's own premises.

In this way the requirements of the purchaser are met, and the vendor, on his part, is adequately safeguarded. It is these changes which have conduced so largely to give the new Act a ready reception on all sides, and which, it is hoped, will result in its being a really beneficial and workable Act.

As regards the Regulations, little more need be said than that these have defined procedure more clearly, while such changes as have been recommended have been sufficiently notified beforehand as to allow the Trade time to adjust itself to the new conditions.

The Chemical Committee has sustained two great losses during the year—the first through the death of Mr. Christopher Middleton, the second in the retirement of Mr. Luddington. Mr. Middleton's had been a long and active life in the service of agriculture, and, even to the last, though crippled by lameness, he carried on his work vigorously, whether with the Farmers' Club, the Central Chamber of Agriculture or the Royal Agricultural Society, in all of which alike he was deeply interested. He was specially concerned in matters relating to the Dairy Industry, and was a recognised authority on questions of Land Valuation, &c. In the work of the Chemical Committee he took a prominent share, as also in that of the Woburn farm, so long as that was maintained by the Society. Mr. Luddington had been Chairman of the Chemical Committee since Sir Bowen Bowen-Jones' retirement and took a leading part in the framing of the Resolutions which led eventually to the introduction of the Fertilisers and Feeding Stuffs Act, 1926.

Following my usual custom I give particulars of matters of interest arising from the examination of samples sent me by Members.

A. FEEDING STUFFS.

1. *Linseed Cake and Meal.*

A sample of Linseed cake meal was sent me for analysis. This, which was guaranteed to contain Oil 12 per cent., Albuminoids 29 per cent., cost £11 10s. per ton on rail.

I found it to come up to the analytical guarantee, but it was dark in colour, had a "burnt" sort of taste and was distinctly acid. It further contained .69 per cent. of Salt. Probably it had been sea-damaged and had subsequently been dried. Nor was it an altogether pure cake, for it had weed seeds in excess, some rape seed, and 1.93 per cent. of sand.

It turned out that this had come from India, and the vendors, on having the complaint made regarding it, offered to take it back.

This was the only sample of Linseed cake submitted that was of unsatisfactory nature.

The price of Linseed cake remained steady, increasing gradually from £12 at the beginning of the year to £12 15s. per ton at the close.

2. *Cotton Cake.*

This, like Linseed cake, does not appear to have been used so much as before, but such samples as were sent were uniformly good. Bombay (undecorticated) Cotton cake is rarely met with now, and it is seldom in these days that a sample of Decorticated Cotton cake passes through my hands. Nor have I met another instance of the high quality Decorticated Cotton cake (Oil 16.6 per cent.) to which I drew attention in last year's report.

The price of Egyptian Cotton cake has gone down from £8 7s. 6d. per ton in January to £7 17s. 6d. in November. Bombay cake (though often unprocurable) was about 10s. a ton lower, while Decorticated Cotton cake and meal figured at about £11 10s. per ton.

3. *Palm Kernel Cake, Groundnut Cake, Soya Cake, &c.*

These, like the foregoing, do not seem to be in such frequent use, except as constituents, along with Linseed cake and Cotton cake, of compound cakes and meals.

Such samples as were sent were good.

Palm Kernel cake, which was quoted at about £10 a ton early in the year, was subsequently hardly procurable. Groundnut cake was priced at £12 to £12 10s. a ton, and Soya cake at £11 5s. to £11 15s. a ton.

4. *Compound Cakes and Meals.*

It is in these, rather than in the single kind of cakes, that the greatest activity has been shown. This is, no doubt, due in great measure to the extended practice of studying the rations of different classes of stock, and mainly in regard to Dairy cows. It is well, indeed, that feeders of cattle and pigs should pay more attention to this important subject, one on which, at our different experimental stations, and notably at the School of Agriculture, Cambridge University, much work of research has been done and is still being carried out. It must be said, too, for the makers of such compound foods, that they have risen well to the occasion, and the number of instances where guarantees given have not been complied with, or where ingredients of harmful or doubtful nature have been used, has undergone a marked and very satisfactory decrease. In addition, makers have shown themselves alive to the requirements and convenience of purchasers, and, by the introduction of cakes in the form of squares that can be easily broken off, of cubes, cakelettes and the like, have contributed to the popularising of the use of such foods.

It is manifestly much more handy—alike in transit by rail and when used on the farm—to have food that can be sent in bags and can be readily broken up, than to have a delivery of large cakes which require much handling, and which have, after arrival, to be put through a cake-breaker. Where, however, such things have to be stored for any length of time, the cakes, which can be stacked in a heap, possess a distinct advantage, and also, as a rule, as regards keeping qualities.

Notwithstanding what I have said, it is still necessary to keep a look-out and to check deliveries by analysis, as the statements given with a purchase do not—as the following instances show—always prove correct.

(a) *Pig Cubes.*

A member sent me a sample of these, supposed to be composed of 30 per cent. Barley meal, 30 per cent. Maize meal, 5 per cent. Whale meal, and 3 per cent. Treacle. The analysis was:—

	Per cent.
Moisture	13.60
Oil	5.68
Albuminoids	19.00
Carbohydrates, &c.	43.43
Woody Fibre	10.58
¹ Mineral Matter	7.71
	<hr/>
	100.00
	<hr/>
Nitrogen	3.04
¹ Including sand	1.99

I found that neither as regards analysis nor constituents did the cubes conform with the statements given. A mixture such as that guaranteed would have yielded only 3 to 4 per cent. of fibre, whereas $10\frac{1}{2}$ per cent. was shown, and, in place of the $43\frac{1}{2}$ per cent. of carbohydrates, there should have been 60 per cent. Both of these are important considerations in the feeding of pigs.

Moreover, while I found Barley and Wheat offals and Maize to be present, there was also Cotton seed, Rape seed, Rice and Oats in the food.

In searching for an explanation of how the case came to be as it was, the purchaser could only get the answer that the mixing had been left to a mill foreman who, finding himself short of ingredients, put in what came to hand!

(b) *Cubes.*

A sample of these was stated to be made up of Decorticated Ground-nut cake, Linseed cake, Maize Gluten feed, Rice meal, and Palm Kernel meal. Ground-nut cake, however, I found not to be present, and, in its place, Cotton seed and Wheat occurred. The analysis was up to guarantee.

5. *Injurious and Undesirable Constituents in Feeding Cakes and Meals.*

- (a) Castor-Oil Bean.
- (b) Cacao Husk.

I have mentioned that, as a class, I have found compound cakes and meals to be now made of better and more satisfactory materials than used to be the case. The introduction of the new Fertilisers and Feeding Stuffs Act, 1926, will, no doubt, effect a still greater improvement, for, not only does the presence in feeding materials of any ingredient deleterious to cattle (Fifth Schedule) constitute an offence, but it is also necessary, when anything of the nature of husks, shells or refuse matter (generally known as "worthless") is contained in a food, that its presence should be declared on the invoice. Such materials are classed together under the Third Schedule of the Act and include such things as peat-moss, sawdust, &c.

(a) Occasionally, however, even when all reasonable care is taken, injurious seeds such as Castor-oil bean, mustard, &c., may find their way into cakes and meals. Such a case is the following :

A member sent me a sample of "Compound Cubes" for examination, as, after feeding his cows on this for two months, some of them were suddenly taken ill, and a veterinary surgeon who was called in gave his opinion that they had been poisoned. In the cake sent me I found quite a considerable amount of Castor-oil bean. On leaving off the cake the cows recovered. I have little doubt—as I have expressed it earlier in this report—that the Castor-oil bean was very unevenly distributed throughout the delivery, and it is quite possible that it was concentrated into a few cakes the feeding of which led to the trouble.

(b) Another material to which suspicion is rightly directed is Cacao husk—the husk of the *Theobroma Cacao* (to be carefully distinguished from *Cocos nucifera*, the Coco-nut Palm) from which the beverage known as "Cocoa" is obtained. This contains an alkaloid, *theobromin*, and there is evidence that it may produce ill-effects on stock. It is, therefore, a material which, I think, should not enter into the composition of compound cakes and meals.

I had two instances during the past year, in which complaint was made of Lambs, in the one case, and Pigs, in the other, not doing well on foods which I subsequently found to contain Cacao husk.

6. *Cereals, Offals, &c.*

While improvement has been marked in the case of compound cakes and meals, I can hardly say that this is true with regard to cereal meals and offals of Wheat, Barley, &c., and it is

in respect of these chiefly that I look to the new Act effecting a desirable change, inasmuch as definitions have been clearly laid down as to what these shall severally be, and, in some cases, what analytical guarantee shall be given. Thus, no addition of other meals, nor of husk (nor other material in the Third Schedule of the Act) is permitted in the case of such things as Barley meal, Ground Oats, Pea meal, Maize meal, &c., while with the sale of Wheat offals of any kind the amount of fibre present has also to be stated.

That there is call for care in regard to such purchases has been shown by several instances brought to my notice. In one case a member sent me six samples of different offals, and I did not find a single one of them to be really satisfactory. In another case a sample of Wheat offals was found to contain 4.58 per cent. of sand and siliceous matter.

In a prosecution which I attended under the Fertilisers and Feeding Stuffs Act, a delivery, invoiced as "Fine Offals," was reported by me to be much adulterated and to contain a quantity of rice-husk ("shudes"), together with Tapioca, Oats, Barley, weed-seeds and sweepings. The vendors were condemned in fine and costs amounting to £25 16s. in all.

7. Crushed Oats and Sussex Ground Oats.

I have had a considerable amount of correspondence on the subject of what constitutes "Sussex Ground Oats." These were originally, no doubt, the produce of Oats grown in Sussex and ground in the old stone-mills to a fineness which made them specially sought after by poultry-keepers. But the name has now a much wider significance and is not confined to Sussex, inasmuch as one can get "Sussex Ground Oats" in parts as far off as Yorkshire and elsewhere. The old stone-mills, too, have, with few exceptions, gone out and been replaced with roller-mills. Rightly or wrongly, there was an impression in some quarters that Sussex Ground Oats might contain a certain amount—say, 10 to 20 per cent.—of Barley or other meal. It was stated that the admixture of some such meal was necessary in order to prevent the stones from getting "clogged" when the oats were at all damp. Clearly, this was open to much abuse, but I am happy to say that it has been settled by the new Act, which only permits of Ground Oats being "the meal obtained by grinding commercially pure oats, as grown."

In one of the Counties for which I act as Agricultural Analyst, a prosecution was instituted against the vendors of a delivery of "Sussex Ground Oats" which I found to have Oat and Barley husk added and also a considerable amount of Tapioca. The vendors incurred penalties amounting to £20 10s.

8. *Sugar-Beet Pulp (Wet and Dried).*

I had a sample of the wet Pulp sent me by a member who told me that he could get it delivered to his cow-sheds for 12s. per ton. The analysis was that of A in the following Table :—

	A	B	C	D	E
	Wet Sugar-beet Pulp.	Mangels.	Swedes.	Dried Sugar-beet Pulp.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Water	73.00	86.8	88.5	12.40	10.22
Albuminoids.	2.81	1.2	1.3	8.93	10.87
Digestible Carbohydrates	16.59	10.3	8.3	59.03	58.51
Indigestible Fibre.	5.54	.8	1.2	16.19	16.61
Mineral Matter	2.06	.9	.7	3.45	3.79
	<u>100.00</u>	<u>100.0</u>	<u>100.0</u>	<u>100.00</u>	<u>100.00</u>

This must be considered decidedly cheap, and if a regular supply of it could be ensured, it would pay a dairyman much better to get this than to grow swedes and mangels for his cows. To facilitate comparison I have given, in the Table, average analyses of Mangels (B) and Swedes (C). With these analyses I place also those of (D and E) of two samples of the Dried Pulp that were sent me. According to information given me in February, 1928, the price of the dried Pulp was £5 15s. per ton delivered, which would be reasonable. In November, however, a member, writing to me, told me that the price to him was £8 5s. per ton delivered to his station. This seems to me a figure far beyond the feeding-value of the material as compared with other foods on the market, and as judged by its analysis.

B. FERTILISERS.

No new materials have of late come into general use in this country. While prices for phosphatic manures have kept almost the same throughout the year, those for nitrogenous salts, such as Sulphate of Ammonia and Nitrate of Soda, have undergone considerable change, these being markedly lower than before. This has been due, no doubt, to competition and to the greatly extended manufacture of synthetic Sulphate of Ammonia. This lowering of price has reduced the unit value of nitrogen generally, and will make it necessary to revise, in the light of it, the Tables of Unexhausted Manurial Value which I am in the habit of issuing, through the Central Association of Agricultural Valuers. This I purport shortly doing. Cyanamide continues to be still the cheapest form of nitrogenous manure; it requires, however, to be used with discretion, and it is advisable to employ it for early application and not as a top-dressing.

Potash manures have, like phosphatic ones, maintained a steady price throughout.

As was to be expected, enquiries as to lime in different forms have been frequent, and the fact that these are now included under the new Fertilisers and Feeding Stuffs Act will bring about greater security for the purchaser, inasmuch as a vendor is now required to state the amount of lime which he guarantees. A further and very desirable introduction in the new Act is the requirement that the fineness of grinding shall be guaranteed in the case of basic slag, ground phosphates and also ground limestone.

One change that will require a little time for merchants and farmers to accustom themselves to is that the old form of guarantee in terms of "phosphate of lime," "soluble phosphate," "insoluble phosphate," &c., is replaced by the statement in each case in terms of "phosphoric acid."

1. Superphosphate.

All the samples of this sent were satisfactory. The price of superphosphate has been steady throughout, ranging from £2 13s. 9d. for 14 per cent. phosphoric acid to £2 18s. 9d. for 16 per cent. per ton.

2. Ground Phosphates.

These continue to be the cheapest form of phosphate supply, and field experiments conducted in different parts of the country, notably in the North of England, with North African phosphate, indicate its useful employment, especially on grass-land.

The price has been about £2 15s. per ton for 23 per cent. phosphoric acid.

3. Basic Slag.

Owing to changes in methods of steel manufacture, the high qualities of Basic Slag, formerly produced by the Bessemer process, have, in this country, given place to the lower grades produced by the now more extensively used "open hearth" process. The consequence is that Basic Slag is seldom procurable of over 16 to 18 per cent. phosphoric acid quality. The prices generally have been £2 13s. 9d. for 16 per cent. phosphoric acid, and £3 for 18 per cent. Additional importance should be directed to the "fineness of grinding," the statement of which, by way of guarantee, is now rendered compulsory.

One instance of failure to comply with a guarantee given was met with, a purchase of 12 tons of Basic Slag, to contain 40/42 per cent. of phosphate of lime, and to be of 80 per cent. "fineness," proving, on analysis, according to the sample sent, to have 36.10 per cent. of phosphate and to be of 47 per cent. "fineness" only. It turned out, however, that part only (about 9 cwt.) of the delivery was like this, the rest being all right. An allowance of 15s. 6d. per ton was made for the inferior portion.

4. *Fish Waste.*

A sample was sent me which was stated to be a mixture of fish drippings and sawdust; it was a refuse material obtained in the smoking of fish. This gave, on analysis:—

	Per cent.
Moisture	24·61
¹ Organic Matter	26·81
Phosphate of Lime	5·31
Lime, Salt, &c.. . . .	32·16
Silica	11·11
	<hr/>
	100·00
	<hr/>
¹ Containing Nitrogen	1·19
Equal to Ammonia	1·44

On land where the addition of organic matter would be desirable, such a material might be useful and would be worth about £1 a ton, delivered.

5. *Poultry Manure.*

A sample of this, made and stored at home from fowl-houses, was sent me. The analysis was:—

	Per cent.
Moisture	20·05
¹ Organic Matter	22·21
² Phosphoric Acid	1·46
Lime	1·69
Oxide of Iron, Alumina, &c.	7·01
Sand	47·58
	<hr/>
	100·00
	<hr/>
¹ Containing Nitrogen	1·27
Equal to Ammonia	1·54
² Equal to Phosphate of Lime	3·64

This, though by no means moist, was of very poor quality, so much of it consisting of mineral matter, largely sand. Reports of mine of earlier years (1921, p. 262; 1923, p. 354) give much better analyses of poultry manure.

6. *Sulphate of Ammonia, Nitrate of Soda, &c.*

As evidencing the great trust entertained in respect of purchases of these salts, the fact might be mentioned that only one sample of Sulphate of Ammonia was sent for analysis, and none of either Nitrate of Soda or Cyanamide. Sulphate of Ammonia has fallen in price from £10 15s. per ton early in the year to £10 in September, rising to £10 5s. in November. Nitrate of Soda, which in January cost £11 7s. per ton, is now £10 4s. only, while Cyanamide has remained steady at from £9 to £9 4s. per ton.

7. Lime.

A different state of things, however, existed with regard to Lime, notably ground Lime, several samples of this sent being unsatisfactory. Two such were the following :—

	A. Per cent.	B. Per cent.
Oxide of Iron and Alumina	6.43	5.44
Lime	67.59	73.63
Silica	16.73	16.02
Magnesia, Carbonic Acid, &c.	9.25	4.91
	<u>100.00</u>	<u>100.00</u>

"A" cost 33s. 10d. per ton, delivered. It was finely ground and well burnt, but was made from an inferior limestone, being very siliceous in nature.

"B" cost 35s. 3d. per ton, delivered, and was neither well-ground nor of high quality.

Considering that I can get lump lime from Derbyshire, and testing 90 per cent. of lime (CaO), for 35s. 9d. per ton, delivered in Bedfordshire, both the above must be considered relatively dear.

C. MISCELLANEOUS.

1. Sugar-Beet.

A sample of exceptional richness in sugar-content was sent me. The roots were very large, averaging, after being "topped and tailed," 3 lb. per root. I quite expected to find them very watery and low in sugar. The very contrary proved to be the case, as, on analysis, they contained 15.9 per cent. of sugar.

This sugar-beet was grown in Alderney, Channel Islands.

2. Hops containing Arsenic.

Two samples sent me contained :—

	A. Grains per lb.	B. Grains per lb.
Arsenic (As_2O_3)	$\frac{1}{10}$	$\frac{7}{8}$

Though neither of these lots contained sufficient Arsenic to prove detrimental for brewing use, the amounts are considerably more than I have shown (*Journal R.A.S.E.* 1923, p. 357) to be present when hot-air kilns are employed.

3. Soils.

As usual, I have had several instances where deficiency of lime was the cause of soils not being thoroughly satisfactory. Four samples of soil were sent me from Lincolnshire, the landlord wishing to know if they required liming, inasmuch as his tenant intended to spend a good deal on lime and might claim subsequently for it. The soils contained respectively :—

	A.	B.	C.	D.
Lime (CaO) . . . . .	.30	1.03	.30	.66

It would appear that A and C would need liming, whereas B had plenty of lime and D probably a sufficiency.

4. *Waters.*

The following cases are of interest as indicating, by analysis, the existence of pollution, which was subsequently traced to its cause.

(a) *Pollution from Drainage System.*

Two well waters were sent me from Cumberland. The analyses were:—

	A.	B.
	Grains per gallon.	
Total Solids	57.26	24.50
Oxidisable Organic Matter . . . . .	.360	.432
Chlorine	4.77	1.00
Equal to Chloride of Sodium	7.87	1.65
Nitric Acid (as Nitrates)	6.10	.21
Free Ammonia	none	none
Albuminoid Ammonia . . . . .	.003	.003

I reported on A as being a hard water, and that, though free from dissolved organic matter and ammonia in any excess, the high amounts of chlorides and nitrates led me to think it one to which polluting matter had had access, the water subsequently having probably been to a certain extent purified in its passage through the soil.

Sample B, I reported on as being very different in these latter respects, and as one suitable for drinking use.

On enquiry as to the possible causes of the differences shown in the analyses, I ascertained that the well from which A came was situate near the drainage system, while B had come from a spring in one of the fields. This explanation was ample to confirm my view that drainage had percolated into the water A.

(b) *Pollution from Liquid Manure Tank Overflow.*

A water was sent me from Sussex, and, on analysing it, I found so much ammonia present—while in other respects the water gave satisfactory results—that I thought something might have been amiss with the bottle in which the water was sent. So I had another sample sent me. This, however, gave results as before, viz. :—

	Grains per Gallon.
Free Ammonia . . . . .	.240
Albuminoid Ammonia . . . . .	.060

On further enquiry I ascertained that there was a liquid manure tank 30 yards from the well, and that this overflowed in wet weather. The well was in the chalk and only 15 ft. deep. The proximity of the liquid manure tank was, undoubtedly, the cause of the pollution.

(c) *Pollution of Pond Water by "Weed-Killer."*

Two samples of water were sent me from ponds into which the washings of paths had entered, the paths having been recently dressed with a weed-killer, and heavy rainfall following. The consequence was that in each pond a number of fish had been killed. The question arose whether the ponds would be safe for cattle to drink from. The areas of the ponds were about $2\frac{1}{2}$ and $3\frac{3}{4}$ acres respectively. I found that the weed-killer used had arsenic in it, and the waters, as analysed by me, contained .008 grains per gallon and .02 grains per gallon of arsenic (As_2O_3), respectively. These amounts would be insufficient to do cattle any harm, and I advised accordingly. Much would depend, of course, on how quickly the arsenic-containing material was distributed throughout the water, but, with such volumes of water, I considered that, except possibly just at the point of inflow and where fish were actually killed, there would be little risk to cattle drinking, inasmuch as they would only take about .10 grains of arsenic per head daily, whereas the toxic dose for cattle is at least 250 grains. I subsequently was informed that the cattle were allowed access and that no ill effects followed.

The samples analysed for Members from December 1, 1927, to November 30, 1928, have been as follows:—

Linseed Cake and Meal	5
Cotton Cake and Meal	4
Palm Kernel Cake	1
Ground-nut Cake	4
Compound Feeding Cake and Meal	41
Cereals, Offals, &c.	26
Brewers' Grains	1
Silage	2
Hay	2
Sugar-Beet Pulp	4
Superphosphate	5
Mineral Phosphate	2
Basic Slag	7
Compound Manure	7
Raw and Steamed Bone	5
Fish Meal	2
Sulphate of Ammonia	2
Shoddy, &c.	14
Potash Materials	2
Hoofs and Horns, &c.	2
Lime, Chalk, &c.	11
Milk, Butter, &c.	7
Soils	30
Waters	42
Miscellaneous	14

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ANNUAL REPORT FOR 1928 OF THE
BOTANIST.

THE enquiries coming in to the Botanical Department during 1927-8 were not quite so numerous as usual. The falling off was only noticeable during the summer and autumn months. During the winter the enquiries were well up to the average in spite of a further decrease in the number of seed samples sent in for testing. The unusually good weather conditions of the latter half of the agricultural year may possibly have led to a smaller demand for information, for the crops, as a whole, were comparatively free from serious outbreaks of disease. Nevertheless, from a numerical standpoint, the identification and control of fungoid pests proved to be the most important section of the Department's work. The increase was due to a growing tendency to take more interest in the various pests which attack fruit of all kinds. Requests for information about recently introduced varieties of the staple crops also increased in number. The subject is dealt with in some detail later in this report, owing to frequency with which "novelties" which are extraordinarily exact counterparts of the older types have been introduced by the seed trade. The Consulting Botanist has to thank members for sending specimens of cereals illustrating this point.

Crops.—One of the results of the climatic conditions prevailing towards the end of 1927 was the frequent failure to plant up the proposed area for the 1928 wheat crop. Drilling was generally impracticable in January and February, and the alternative had to be faced of sowing a definite spring wheat, such as Red Marvel, or of making up the area with barley or oats. One member, under the impression that Little Joss was a spring wheat, took the risky course of sowing it at the end of March. The crop failed, and then the question was raised whether the merchant who supplied the seed could be held responsible. However, there was no case, for it was sold under a correct description and delivered early in February in ample time for securing a crop had it been practicable to drill then. The advice that no wheat normally used for autumn sowing should be drilled later than the middle of February, which has been repeated several times in this annual report, appears to need further stressing.

The weather, too, was responsible for a much-needed test of the comparatively recent practice of sowing spring types of oats in the autumn months. The winter was not an exceptionally severe one as far as temperatures were concerned, but by the beginning of January the soil was saturated with water,

and with the tilth largely destroyed it was in no condition to carry away the excessive rainfall that followed. Reports of the failure of autumn-sown oats came in freely during the month and the opportunity was taken to look into the matter generally. The results were very much what was to be expected. The Grey Winter oat was found to be unquestionably the hardiest. It was followed closely by the Black Winter oat,¹ only two failures coming to light. No other really hardy type was found, but Bountiful, normally a spring oat, proved at least as hardy as the reputed winter oat Marvellous. Here and there Bountiful, and even Abundance and Victory, came through the bad period sufficiently well to be left down. Their survival on some of the farms near Cambridge was attributed, with some reason, to a protecting cover of snow, for on fields where the snow did not lie they failed. But the evidence was not conclusive, for the crops on the different fields were at different stages of growth, and there was evidence to show that crops which were barely through the ground survived where more established crops, from the same supply of seed, failed.

It is clear now that the autumn sowing of any other sort of oat than Grey or Black Winter is a lottery. But in the warmer districts in the south and on well-drained soils where the risk of failure can be assessed with more certainty, Bountiful may prove a better choice on account of its stiffer straw.

Attempts are being made to produce new types of winter oats. As a guide to their hardiness it may prove worth while to carry out a preliminary test before planting any considerable area. This can be done by setting a few seeds either in the open or in pots and noting the habit of the young foliage. If it has upright growth, then in all probability winter hardiness is lacking.

Enquiries with regard to sugar-beet, apart from a couple of cases of disease of little immediate importance, centred round the problem of bolting. This was far less serious than in the preceding season, but nevertheless here and there fields were seen in which a considerable percentage of the plants were flowering prematurely. It is probable that a check to the development of the young plants was responsible for this, for on one farm seed from the same bulk which had been sown later in the season had produced a normal plant. There is, however, evidence to show that bolting is to a considerable extent a matter of strain. The dwarf-foliaged Dutch strains appear to be singularly free from this bad characteristic when compared with French strains, whilst the German strains differ

¹ The Black Winter oat should not be confused with Giant Black Winter. The latter resembles Bountiful in so many characteristics that it is apparently impossible to differentiate between them.

amongst themselves, the well-known stocks of Kuhn & Co. being apparently the most reliable.

Cultivation.—The possibility of obtaining nitrogenous manures at lower prices than have prevailed in the past has led to a number of enquiries about their use on arable and grass land. Though it is universally known that marked increases in the yield both of grain and grass follow on their application, much experimental work is still necessary before advice can be given regarding their use in greater quantities than past experience has shown to be advisable. The best known of the synthetic nitrogenous manures is still sulphate of ammonia. Used at the rate of one to one and a half hundredweight per acre, it will almost invariably pay for itself and leave a fair margin of profit. With heavier dressings risks have to be faced which cannot be predicted owing to their dependence on climatic conditions. The two serious ones are the possibility of exceptionally severe rust attacks ruining the crop and its failing to stand in rough weather. Recent experiments have shown that the risks may be worth running with a stiff-strawed variety of wheat. There are, however, few varieties of oats and none of barley on which over-average nitrogenous dressings should be used.

The most obvious effect on pastures and meadows is to increase the yield of grass at the expense of the clovers, which may even disappear more or less completely after a few dressings. Where used over a long series of years, as in the case of the well-known Rothamsted plots, the grassland deteriorates considerably. Possibly, however, were its use supplemented by the occasional application of lime these ill-effects would not occur. It is probable that the newer nitrogenous artificials containing lime in combination will be free from this defect, and further, that their use will not result in the souring of light land, which has so often been one of the marked effects of using sulphate of ammonia.

In view of the frequency of questions regarding the value of new introductions, especially of cereals, special attention has been given to the subject for several years, and every opportunity has been taken to compare the new introductions with old-established varieties. To give advice on the subject is often a matter of difficulty. In the case of a novelty offered for the first time it is the exception for anyone but the vendor and, possibly, those who have grown seed for him under contract to be able to form any opinion of its value. The buyer has therefore to trust to the statements made in catalogues and estimate their reliability to the best of his ability. By the time a novelty has been on the market for two seasons it will generally have been tested at several experimental stations, and

a more or less well-defined opinion will have been obtained as to whether it is an improvement on existing types. Then one is in a position to suggest either that it should be tried on a small scale, or to say that the information available does not point to its being of any special value.

Whenever advice on this subject has been required during the past two years and there has been no definite information to go upon, the suggestion has been made that it would probably be the best course to wait and see whether the novelty had any real value. The suggestion is obviously open to criticism and the main reason for it should be stated. It is to be found in the fact that some of the highly-priced novelties of recent years resemble existing types so closely that when grown alongside each other it is impossible to distinguish them apart. They are, to use a now generally accepted term, "synonyms."

By way of an example, the barley New Cross may be compared with an older type, Spratt-Archer, which has now become one of the most widely grown barleys in the country. Spratt-Archer has narrow, almost prostrate foliage in its early stages of growth—a characteristic distinguishing it from all other English barleys. The more recent New Cross has the same type of foliage. When grown alongside, under conditions as identical as it is possible to make them, both come into flower at the same date, the plants reach the same height, the straw is similar, the ears ripen simultaneously, the yields of grain are the same, and there is no difference between the two when either the weights of 1,000 grains or the total nitrogen percentage are compared. These striking resemblances were not disclosed in the catalogue description, neither would they be anticipated in the case of a distinctively named novelty. Anyone already growing Spratt-Archer might then unwittingly purchase and grow its synonym. He might even do worse, and by purchasing and growing Fortyfold have three stocks of barley under different names, but otherwise indistinguishable.

Other examples could be provided amongst recently introduced forms of wheat and oats, and though synonyms amongst the cereals may not be so abundant as the investigations of the National Institute of Agricultural Botany have shown them to be amongst potatoes, the necessity for caution on the part of the purchaser is obvious.

Plant Diseases.—The first specimens of potato blight (*Phytophthora infestans*) were seen on imported Jersey potatoes in the first week of May. A fortnight later diseased foliage was received from Cornwall. The earliness of the outbreak was disquieting, but favourable weather conditions checked the spread of the fungus so effectively that no other specimens or enquiries were received in the Department during the course

of the season. In some parts of the country the freedom from disease persisted until lifting time and growers had the unusual experience of gathering in a crop on which the haulms, and even the foliage leaves, were still green. The almost negligible loss from disease will undoubtedly result in better yields than those of last season, when the haulms were killed off in August in many districts. The only other specimens sent in of the numerous pests capable of attacking potatoes were one of the virus disease "crinkle" on Myatt's Ashleaf and a bacterial disease, "black-leg," on an unidentified variety. Neither attack was serious.

The mildews, using the term in its wide popular sense, appear to have been the most successful of the fungoid parasites during 1928. Their season, as is generally the case, started with the well-known apple-mildew, which appeared in abundance on young shoots apparently all over the country. The obvious symptoms of the attack continued for some time and a specimen was sent in for identification near the end of July. Even in November, after the bulk of the foliage had fallen, young shoots and foliage covered with the mealy spores were found.

The American gooseberry mildew was also unusually prevalent. In one plantation where systematic efforts were made to keep the disease under control by spraying and autumn pruning the berries were so badly attacked that the greater part of the crop was unsaleable. It is to be feared that the control of the disease is becoming more difficult owing to neglected bushes in cottage and other gardens providing widely distributed centres of infection.

Several specimens of the downy mildew of swedes were sent in for identification, one case being particularly serious on account of the area involved. The fungus attacks the plant in the seedling stage, and by the time the crop is ready for singling the under surfaces of the cotyledons and the first two or three foliage leaves become covered with white, powdery masses of spores. The problem then arises whether the thinning out should be continued, or whether the field should be re-sown. Weather conditions mainly determine the course of the disease. In a spell of dry weather it spreads and the plants may succumb, whilst under rainy conditions they will generally "grow away" from the disease quickly and give a normal crop. On the strength of a week-end weather forecast suggesting the likelihood of rain, the suggestion was made that singling should be continued. This fortunately proved to be the right course. Mildews on spinach, chrysanthemums and garden peas were also sent in with requests for information on methods of control.

Two enquiries about the treatment of apple-canker received attention. In one case an old orchard was so heavily infected

that beyond the removal of the worst branches nothing further seemed practicable. In the other vigorous young espalier-trained Allington Pippins were concerned. These had been planted as four-year-old specimens two seasons previously. An opportunity for inspecting the trees occurred and it then became evident that the cankers were of more than two years' growth, and their general disposition, at intervals along the main stem, suggested that they had originated at wounds caused by supporting ties. The lowest cankers were too large to be got rid of by paring, which at the best is a doubtful method of cure, and their replacement by uninfected specimens seemed to be the wisest course.

In June four samples of diseased strawberry plants were received, with the comments that the plants, though only two years old, were failing to make their normal growth. The trouble is a widespread one. It is attributed popularly to a "wearing-out" process analagous to that of potatoes. Others consider it to be due to errors in cultivation, particularly in connection with manuring, whilst pathologists who have examined diseased plants have found several distinct species of fungi as well as some insect pests on them. The suggestion has also been made that the trouble is due to an aphis-borne virus disease. Until the real cause of the disease has been made out, likely methods of prevention or cure cannot be suggested. Meanwhile, efforts are being made both by nurserymen and experimental stations to work up stocks of healthy runners. These, however, should only be planted on uninfected areas, for there is evidence that the disease, or possibly the diseases, for there may be more than one, may persist for some time in the soil.

The diseases of fruit formed the subject-matter of more enquiries than usual. But the list of species reported on was a short one, such pests as scab in apples and pears, peach-curl and mildews, accounting for most of the enquiries.

Cereal diseases, with the one exception of "whiteheads," were badly represented. Several facts noted this season suggest that the characteristic symptoms of the disease may be due to other causes than *Ophiobolus*, and that it is unsafe to trust a diagnosis made without actually finding the parasite. An experience gained whilst following the course of an epidemic which killed some 30 per cent of the plants in a wheat field near Cambridge may serve to illustrate this point. After harvest the disease, assumed until then to be due to *Ophiobolus*, was traced to a different fungus, a *Leptosphaeria*. The epidemic occurred on experimental plots, some of which were being treated with sulphate of ammonia. It was noteworthy that the disease was far more abundant on plots receiving dressings of this artificial manure.

Poisonous Plants.—Further enquiries were received this season with regard to the possibility of ragwort (*Senecio Jacobæa*) being a poisonous plant. Until comparatively recently it has generally been considered to be harmless, and there seems to be sufficiently good evidence that it actually is as far as sheep are concerned, for it is a common practice to keep this weed under control by grazing heavily with them. Stock, as a rule, appear to avoid the plant, and consequently they are unlikely to consume any considerable quantity whilst out in the pastures. In the form of hay, though, dangerous quantities might be eaten.

The plant has been introduced into Canada and New Zealand and the diseases of stock known respectively as Picton and Winton's disease have been attributed to it. In New Zealand, too, sheep have been known to succumb after feeding for some months on heavily infested pastures. It is possible that the toxic material present in the plants acts as a cumulative poison and that its effects are not visible until some time after ingestion.

A case diagnosed as buttercup poisoning provided another of the unsolved problems so frequently met with when stock die from some cause not readily identifiable by the veterinary surgeon. The symptoms in this case agreed generally with those known to follow upon eating quantities of *Ranunculus Ficaria*. But at the time the enquiry was received the leaves of this plant, which is not a common constituent of the flora of good pastures, had died down. In view of the possibility of other poisonous species of buttercup being responsible, an immediate visit was paid to the farm. But a thorough search of the fields to which the cattle had access, followed a few days later by an examination of the meal, and even the roots, being fed to them, failed to disclose anything known to be capable of producing such symptoms.

A case of horse poisoning came to light when a member sent a specimen, asking whether it was "undoubtedly" hemlock. The enquiry was a natural one, for many plants belonging to the group of the Umbelliferae, in which it is included, are so much alike that even a systematist often wants complete specimens before he can be sure of their identification. Moreover, hemlock and kex are the two commonest names for umbelliferous plants. Anyone who has once seen the genuine plant will generally identify it again with certainty, for its general habit of growth and appearance are characteristic. Failing this familiarity with the plant, it can be recognised by the purple splashes and streaks on the lower parts of the stem and the polished surface of the foliage. It is a good policy to exterminate the plant at sight, for where conditions suit it, it can spread very freely.

Other plants enquired about in this connection were *Thuja*, *Lonicera nitida* and *Berberis Darwinii*, all of which were being used for hedges to which cattle might get access.

Grassland and Fodder crops.—Most of the enquiries have been of an ordinary routine type, information being required on such subjects as suitable mixtures for long leys, and permanent grassland, seed-rates, the use of nurse crops, grassland weeds and the management of recently established fields. Most of them had been dealt with in the leaflet, *Sowing Down Land to Grass*, issued by the Society in 1923. Only one seed's mixture for rather unusual conditions was required. The land was a heavy clay no longer cultivatable at a profit, and it was proposed to convert it into a sheep-walk at the lowest possible cost. A mixture containing a large proportion of Black Medick was suggested for the purpose. Suggestions for mixtures of seeds suitable for an autumn-sown silage crop were also sent to two members.

Seed Testing.—The number of samples of seeds tested was the lowest on record for many years, and out of a total of thirty nearly half were seeds of market-garden crops, such as onion, parsnip, spinach and cabbage. The agricultural seeds were represented by clover (7), winter oats (4), barley (3), and perennial rye grass (2). All of these were home-grown samples harvested under somewhat unsatisfactory conditions in 1927. The better weather of the 1928 harvest may account for the fact that, up to the present, no seed samples of the current season's growth have been sent in for examination. It is difficult, however, to account for the smallness of the numbers early in the year, for judging from those tested, a knowledge of the germination capacity was essential if even approximately accurate seed-rates were required. The clover samples were not only badly weathered but the seed was poorly developed, and had the bulks been fully screened about half of their weight would have been lost. Their average germination was about 50 per cent., indicating a seed-rate of about 50 lb. per acre in place of the normal 16 lb. The winter oats were almost as bad, but the barleys, though obviously sprouted, were, with a germination range of roughly 80 to 90 per cent., fairly satisfactory.

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ANNUAL REPORT FOR 1928 OF THE ZOOLOGIST.

INTRODUCTION.

THE following pages contain a brief review of the principal insect pests of the year. In the early months, the prolonged cold weather was chiefly responsible for the unsatisfactory state of some crops, and injurious insects were slow in beginning their attacks; but later, in the exceptionally fine summer and autumn, pests of all kinds made their appearance, though not often with very destructive results.

The subject of the warble-fly is again referred to, in view of the vigorous and very successful campaign recently carried on in Denmark towards its eradication.

Mention is made of a willow disease, not perhaps of great importance, but interesting as hitherto unknown in this country, though recorded on the Continent.

CEREALS.

Early in the year slugs were more destructive to winter oats and wheat than any other pest. Leather jacket attacks and a few cases of wheat bulb-fly were also reported. In June and July cases of frit-fly attack on oats—severe in some districts—were complained of, but on the whole this insect was far less destructive than we were accustomed to find it some years ago. It is well known that, as a rule, late sown oats suffer most from frit-fly, and it was rather anticipated that the unfavourable spring weather this year would delay the sowing of oats and perhaps favour the fly; but few cases of bad attack were notified. Indeed, for the last four years the injury done by this pest has been relatively small. All insects have their fluctuations, and the causes are often obscure, though weather influences and parasitism are generally among them. Mr. J. C. F. Fryer suggests that there may be two quite different reasons for the comparative immunity of the oat crop. The flies, through unfavourable conditions, may be much less abundant than usual, or, if in their normal numbers, they may appear rather late, so that the oats are too far advanced for their use and the perennial grasses bear the brunt of the attack.

There were a few cases of gout-fly in barley, and of eel-worm in oats and also in wheat.

PEAS AND BEANS.

These crops, like most others, suffered severely from slugs. There were also bad attacks, in the early stage, by millipedes

and *Sitones* weevils. Later, beans suffered severely from the black aphid, which was one of the most conspicuous pests of the year. It not only did great harm to garden and field-beans, but spread to a variety of other crops, such as mangold, and was very noticeable on thistles and dock.

Late garden peas suffered, as usual, from the pea moth, and some rather bad cases of pea midge were observed.

VEGETABLE CROPS.

Many turnip pests were reported, all of them familiar insects. Turnip-fly was troublesome in some districts, and so were cut-worms (surface caterpillars). Root maggots were particularly harmful, and in some Cambridge experiments carried out by Mr. Petherbridge on a crop where the attack turned out to be especially severe, he found that the rows which he had dressed with naphthalene escaped injury to a marked degree, while neighbouring plants were destroyed. The naphthalene was distributed as a powder over the young plants and seems to have been remarkably effective in preventing the flies from laying their eggs—much more so than any other of several insectifuges experimented with.

There were some bad attacks of seed-beetles on turnips grown for seed, and cases of turnip gall-weevil seemed to be more abundant than usual. Like all other crops, turnips suffered from aphid.

The sugar-beet crops which came under my notice were for the most part remarkably free from pests, but cases of attack to the seedlings by *Collembola*, millipedes and pigmy beetle were notified, and some amount of damage was done by mangold-fly on both sugar-beet and mangolds.

Some very bad cases of celery-fly were observed—in contrast to 1927, when this pest was almost absent in some districts which usually suffer greatly.

FRUIT.

There is little of interest to record of the multitudinous fruit pests. The most conspicuous were the various species of aphid, of which some, the woolly aphid for example, were more abundant than usual.

Capsid bugs attacked not only apples, but currants and gooseberries. In the case of the codlin moth, two broods were observed this year, due, no doubt, to the exceptionally fine season. Some insects injurious to fruit, *e.g.* tortrix moths, apple sucker, pear midge, and raspberry beetle, were not often inquired about; but gooseberry saw-fly, apple-blossom weevil and red spider were destructive, and there were complaints of

Phyllobius weevils, which are always present, but would seem to be becoming increasingly troublesome, unless, as is quite likely, the damage they do has hitherto been overlooked.

So far there is no evidence that the dreaded cherry fruit-fly has succeeded in obtaining a footing in English fruit gardens.

There was one complaint of the "ambrosia" beetle (*Xyleborus*) destroying the branches of apple trees.

The two experiments on the treatment of diseased black currants by firing—a method the value of which I have several times proved in the case of odd bushes—could claim no success. Of the first, which was on a very small scale, no particulars were furnished. It was commenced under one gardener, continued under a second, and abandoned under a third. The last gardener informs me that a few bushes were pointed out to him as having been fired, but that they were grubbed up. In the other experiment, which had kindly been arranged for by Colonel Wheeler, the burning was found so laborious that it was only carried out on a part of the plantation, so that complete success could hardly be expected. Unfortunately the whole crop developed reversion—a disease for which it is known that firing is no remedy.

FOREST PESTS.

Several willow pests were notified, especially aphids, leaf-beetles (*Phyllodecta*), and gall midges, and a willow disease new to this country made its appearance in the neighbourhood of Cambridge, where it was first noticed by Mr. Cox of the Forestry School. This was in the form of a "witch's broom" similar to that frequently affecting the birch. The buds—both leaf and flower buds—were attacked and distorted, giving rise to abnormal growths. It is known on the Continent, and is attributed to a gall mite, *Eriophyes triradiatus*. It is probably more interesting than important, though a case was seen where the "brooms" were very numerous, and the effect on willow grown for bat manufacture must have been deleterious.

Other insects attacking growing trees were seldom inquired about and no widespread attacks were reported, but there were several questions about "powder-post" beetles and other insects destructive in timber-yards.

ANIMAL PARASITES.

Questions are frequently asked about parasites of domestic animals. Lice, fleas, ticks, and parasitic worms have been the subject of inquiry, and dying bees have been sent to me to ascertain whether or not they harbour the recently discovered bee-mite. In warmer countries ticks are known to convey several serious diseases to cattle, and those engaged in the study

of these diseases often require to know the particular tick concerned. It is interesting to note in this connection that I have received a large number of ticks from one of the mandated territories (Palestine) for identification.

Another case of alleged "pig fleas" was reported, and the insect turned out to be the ordinary human flea (*Pulex irritans*). As stated in the 1927 Report there is no specific pig flea, but pigsties are very attractive to various fleas for the purpose of egg-laying, as the flea larvæ feed on filth. One application had reference to "harvest bugs" or "harvest mites." A great deal of attention has recently been paid to these parasites because of certain diseases which have been proved to be carried by them in the Far East. They have no agricultural importance in this country, but a few words about so familiar a pest of man may be of interest.

Many people are annoyed, and some quite seriously affected, by minute red mites which attach themselves to the skin and cause great irritation in the summer months. They seem particularly to affect chalky downs, and are often a great nuisance on golf-links. It is a remarkable fact that the life-history of this very familiar pest is not yet fully elucidated. The trouble is that the mite is only parasitic as a larva—the immature stage into which it hatches out from the egg, and in its later stages it is free-living and we do not know on what it feeds. It is certainly the young stage of one of the mites known as Trombididae, some of which, conspicuous by their scarlet colour, may often be noticed crawling about in the soil or on herbage. The remarkable thing is that the particular mite which is the parent of the harvest bug has never yet been found in this country, even by those who study and collect this group of arachnids. The explanation probably is that it is exceedingly small, and that it seldom appears above ground, living in the soil or perhaps in the nests of field-mice or other small mammals, which are the habitual "hosts" of the parasitic larvæ. Man is only attacked incidentally, for it is obvious that the mite would have little chance of completing its development on a human subject.

The particular "harvest bug" which conveys river fever in Japan has been successfully carried through all its stages, and the form of the adult is well known. The European variety is doubtless very similar, and it is unlikely that it will long remain undiscovered.

WARBLE-FLY.

In my report for 1916 a full account was given of the life-history of the warble-fly which, after many years of research on the part of a host of workers, had at last become known with

tolerable accuracy. It is sufficient here to repeat that the eggs are attached to hairs on the legs and lower part of the body ; that the grub on hatching out burrows its way into the body at the spot where the egg was laid ; and that after spending many months in the tissues of the animal's body it enters the hide of the back *from the inside*, and there forms the familiar "warble."

From a practical point of view the chief importance of the newly discovered life-history lay in the fact that it discredited the very general practice of smearing the backs of cattle to keep off the fly. Seeing that the eggs are never laid on the back, how can smearing the back keep off the fly ? Yet many farmers to this day believe that it does. A farmer will say, "I smear my cows and they have few warbles, whereas my calves and yearlings, which are not smeared, have many warbles." No doubt, but he would find exactly the same thing if he did not smear at all ! It is always the young animals that are most affected. The only way of settling the matter is to dress some animals and to leave other untreated, for comparison. This has been done experimentally with absolutely conclusive results. Professor Carpenter smeared 103 animals more thoroughly than any farmer would be likely to do, and at the same time kept 68 animals untreated but otherwise under the same conditions, and this was the result :—

	Dressed		Untreated	
	No. of Animals	Average No. of Warbles	No. of Animals	Average No. of Warbles
Calves	67	10	24	12
Yearlings	28	24.5	11	27.6
Cows	8	8.7	33	3.3

Clearly, if preventive smearing is to be practised at all, it ought to be applied, not to the back, but to the legs and belly. This can be done quite easily by causing the cattle to walk through a bath of an appropriate wash which is thus automatically applied to the lower part of the animal ; and this measure is, in fact, practised to some extent in America, but has not met with wide acceptance, for though it certainly diminishes the number of warbles, the result is not commensurate with the trouble and expense. It is now universally recognised that no *preventive* treatment is more than partially successful, and that if we wish to exterminate the pest we must concentrate on curing the warbled animals.

From September to April there are no warble-flies, and the

insects exist only in the form of maggots somewhere in the bodies of the animals. In the spring these maggots appear in the skin of the back, having entered the hide from below. If they could all be destroyed before turning into flies, there would in the following year be no flies to continue the attack.

That a restricted area can thus be cleared of flies was definitely proved by experiment in the case of an island off the coast of Ireland.

Interest in the subject is revived by the remarkable success attending recent efforts to stamp out this pest in Denmark. Five years ago the Danish Government took up the matter in earnest, compulsory treatment of warbled-cattle being instituted in 1923. At that date 39 per cent. of the hides in the Danish hide markets were warbled. In 1924 the percentage had fallen to 8 per cent., and in 1925 to 4 per cent. Denmark would appear to be well on the way to the complete eradication of the pest.

If the warble-grubs are squeezed out from the backs of the animals before they are "ripe," they are unable to complete their development, and are safely accounted for. This is the most effective treatment, but it is slow and laborious. If a dressing could be discovered which, without injury to animals or hides, would kill the warble-grubs *in situ*, by smearing it over the backs, matters would, of course, be greatly simplified. Those hitherto tried in this country have not been satisfactory, either being inefficient or more or less injurious in their effects.

The Danish authorities claim to have been more successful in this method of treatment, and in the campaign against the warble-fly certain proprietary ointments, smeared over the back, are asserted to have had a great share in the very striking results obtained. The proprietors of one of these ointments—Bodivera oil, with a view to obtaining a market for it in this country, offered to supply a certain amount of it free of cost for experimental purposes, and some of the English County authorities closed with the offer. We decided to give it a trial at the Cambridge University Farm on the comparatively small number of animals at our disposal.

Many farmers in Leicestershire and Worcestershire appear to have reported very favourably on the ointment. The Cambridge experiment, carried out by Mr. Garner, was sufficiently encouraging to warrant its repetition next spring, when we shall be in a better position to report fully upon it. The treatment certainly killed the warble-grubs, none of which survived. Of course, a considerable time may elapse between the appearance of the earliest and the latest warbles in the hide, and when, a fortnight after treatment, warbles were still present, it was not always certain whether or not they were new arrivals.

Twenty-six animals were treated. They did not resent the application of the ointment, and except in one case no ill effects were observed. One animal, rather badly warbled, developed two troublesome ulcers, and it was chiefly on its account that we were unable to give an entirely favourable report without further experiment.

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Royal Agricultural Society of England.

Established May 9th, 1838, as the ENGLISH AGRICULTURAL SOCIETY, and incorporated by Royal Charter on March 26th, 1840.)

Patron.

HIS MOST GRACIOUS MAJESTY THE KING.

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1895	BEDFORD, Duke of, K.G., Woburn Abbey, Bedfordshire.
1893	CORNWALLIS, LORD, Linton Park, Maidstone, Kent.
1885	COVENTRY, Earl of, Oroome Court, Severn Stoke, Worcestershire.
1887	CRUTCHLEY, PERCY, Sunninghill Lodge, Ascot, Berkshire.
1904	DARSBURY, LORD, C.V.O., Walton Hall, Warrington.
1898	DEVONSHIRE, Duke of, K.G., Chatsworth, Bakewell, Derbyshire.
1899	NORTHBROOK, Earl of, Stratton, Micheldever, Hampshire.
1881	PARKER, HON. CECIL T., The Grove, Crowtham, Wiltshire.
1891	STANFORTH, Lt.-Col. E. W., C.B., Kirk Hammerton Hall, York.

Vice-Presidents.

1897	COLTMAN-ROGERS, C., Stanage Park, Bucknell, Salop.
1908	DERBY, Earl of, K.G., Knowsley, Prescott, Lancashire.
1924	DESBOROUGH, LORD, K.G., Taplow Court, Buckinghamshire.
1900	GRAVES, R. M., Wern, Portmadoc, North Wales.
1910	HARLECH, LORD, Brogyntyn, Oswestry, Shropshire.
1903	HARRISON, WILLIAM, Albion Iron Works, Leigh, Lancashire.
1909	HAZLERIGG, Sir ARTHUR G., Bart., Noseley Hall, Leicestershire.
1904	MATHEWS, ERNEST, C.V.O., LL.D., Elmodesham House, Amersham.
1915	PORTLAND, Duke of, K.G., Welbeck Abbey, Worksop, Notts.
1914	POWIS, Earl of, Powis Castle, Welshpool, Mont.
1928	TREDEGAR, Viscount, Tredegar Park, Newport, Mon.
1907	YARBOROUGH, Earl of, Brocklesby Park, Habrough, Lincolnshire.

Ordinary Members of the Council.

1922	ALEXANDER, HUBERT, The Croft, Sully, near Cardiff (Glamorgan).
1923	ASETON, T. W., Estate Office, Hursley Park, Winchester (Hampshire).
1911	BEHRENS, Major CLIVE, Swinton Grange, Malton (Yorks, N Riding).
1921	BLEDISLOE, LORD, K.B.E., Lydney Park (Gloucestershire).
1928	BOHANE, EDWARD, C.B.E., Simmons Court House, Donnybrook, Co. Dublin (Ireland).
1922	BROCKLEBANK, Rev. C. H., Westwood Park, West Bergholt, near Colchester (Cambridgeshire).
1906	BROOKLEHURST, HENRY DENT, Burley, Woolton Hill, Newbury, Berks (Gloucestershire).
1918	BURKE, U. ROLAND, Chatsworth, Bakewell (Derbyshire).
1923	BURKITT, WILLIAM, Grange Hill, Bishop Auckland (Durham).
1921	BURRELL, Sir MERIK R., Bart., Floodgates, West Grinstead (Sussex).
1929	BUXTON, Capt. H. G., Cokesford Farm, Tittleshall, King's Lynn (Norfolk).
1928	CHRISTY, Capt. HUGH A., Llangoed, Llyswen, Breconshire (South Wales).
1924	COTTERELL, Sir JOHN R. G., Bart., Garnons, Hereford (Herefordshire).
1921	COURTHOPE, Col. Sir G. L., Bart., M.C., M.P., Whiligh (Sussex).
1917	CURRE, Col. Sir EDWARD, Bart., Itton Court, Chepstow (Monmouthshire).
1921	*DAMPIER-WHEATHAM, W. C. D., Upwater Lodge, Cambridge.
1926	DUDGEON, Major CECIL RANDOLPH, Cargen Holm, Dumfries (Scotland).
1927	DUGDALE, Major W. MARSHALL, D.S.O., Llwyn, Llantyllin, S.O. (North Wales).
1913	EVENS, JOHN, Burton, near Lincoln (Lincolnshire).
1926	EVERARD, W. LINDSAY, M.P., Ratcliffe Hall, Leicester (Leicestershire).

* Nominated Member of Council.

Year when
first elected
on Council

Ordinary Members of the Council (continued).

- 1905 FALCONER, JAMES, *Northbrook Farm, Micheldever Station (Hampshire).*
 1921 FENWICK, E. GUY, *North Luffenham Hall, Stamford (Rutland).*
 1906 FITZWALTER, LORD, *Goodnestone, Canterbury (Kent).*
 1928 FOLKESTONE, Viscount, *Longford Estate Office, Alderbury, Salisbury (Wiltshire).*
 1928 FORSEAW, THOMAS, *The Stud, Carlton-on-Trent, Newark (Nottinghamshire).*
 1924 *GABRETT, COL. FRANK, C.B.E., *Aldringham House, nr. Leiston, Suffolk.*
 1922 GATES, B. J., *Pembury, Tring (Buckinghamshire).*
 1916 GILBEY, Sir WALTER, Bart., *Elsenham Hall, Elsenham (Essex).*
 1925 HALE, WINDHAM E., *Mowbreck Hall, Kirkham (Lancashire).*
 1925 HALL, J. HERBERT, *Hill House, Mobberley, Knutsford (Cheshire).*
 1905 HARRIS, JOSEPH, *Brackenburgh Tower, Carlisle (Cumberland).*
 1926 HASTINGS, LORD, *Melton Constable Park (Norfolk).*
 1905 HISCOCK, ARTHUR, *Manor France Farm, Stourpaine, Blandford (Dorset).*
 1919 HOBBS, ROBERT, *Kelmascott, Lechlade, Glos. (Oxfordshire).*
 1923 JOHNSTONE, Capt. G. H., *Trewithen, Grampound Road (Cornwall).*
 1912 LANE-FOX, Col. Rt. Hon. G. R., M.P., *Bramham Park, Boston Spa (York, W. Riding).*
 1927 LOYD, A. T., *Lockinge House, Wantage (Berkshire).*
 1926 McWILLIAM, W. S., M.V.O., *Garbity, Orton Station, Morayshire (Scotland).*
 1909 MANSELL, ALFRED, *College Hill, Shrewsbury (Shropshire).*
 1922 MATTHEWS, FRANK P., *27 Cavendish Square, W.1 (London).*
 1928 MATTHEWS, R. BORLASE, *Greater Felcourt, East Grinstead (Surrey).*
 1922 MILDMAI OF FLETE, LORD, *Flete, Ermington S.O. (Devon).*
 1928 MORTIMER, H. P., *Kingsley Windmill, via Warrington (Cheshire).*
 1911 MYATT, JOHN, *Lincoln House, Shenstone, Lichfield (Staffordshire).*
 1927 NEAME, THOMAS, *The Offices, Macknade, Faversham (Kent).*
 1922 NELSON, R. B., *Holmwood, Sandiway (Cheshire).*
 1922 NEWTON, Sir DOUGLAS, K.B.E., M.P., *Croxtan Park, St. Neots (Huntingdonshire).*
 1915 OLIVER-BELLASIS, Capt. R., *Shilton House, Coventry (Warwickshire).*
 1925 PAGET, LEOPOLD C., *Middlethorpe Hall, York (York, W. Riding).*
 1909 PATTERSON, R. G., *Acton Hill, Stafford (Staffordshire).*
 1921 PLATT, Major ERIC J. W., *Gorddinos, Llanfairfechan (North Wales).*
 1916 PRICE, F. HAMLYN, *7 Harley Gardens, The Boltons, S.W.10 (London).*
 1924 *RANSOME, EDWARD C., *Highwood, Ipswich.*
 1905 REA, GEORGE GREY, *Doddington, Wooler R.S.O. (Northumberland).*
 1926 ROBBINS, R. R., C.B.E., *Hollycroft, Sipson, Yiewsley (Middlesex).*
 1927 *RUSSELL, Sir JOHN, D.Sc., F.R.S., *Rothamsted Experimental Station, Harpenden, Herts.*
 1923 SAMPLE, C. H., *26 St. Mary's Place, Newcastle-on-Tyne (Northumberland).*
 1921 SILCOCK, T. B., *Arthfield House, Poulton-le-Fulde (Lancashire).*
 1928 SMITH, Col. ABEL HENRY, *Woodhall Park, Hertford (Hertfordshire).*
 1907 SMITH, FRED, *Deben Haugh, Woodbridge (Suffolk).*
 1912 STRACHIE, LORD, *Sutton Court, Pensford (Somerset).*
 1923 TANNER, E. CRAIG, *Eyton-on-Severn, Wroxeter (Shropshire).*
 1920 THORNTON, F. H., *Kingsthorpe Hall, Northampton (Northants).*
 1923 TOMKINSON, Major C. W., *Willington Hall, Tarporley (Cheshire).*
 1924 WAKEFIELD, JACOB, *Sedgwick House, Kendal (Westmorland).*
 1926 WEBB, FRANK, *Billington Estate Office, Leighton Buzzard (Bedfordshire).*
 1925 WEIGALL, Lt.-Col. Sir ARCHIBALD G., K.C.M.G., *Petwood, Woodhall Spa (London).*
 1889 WHEELER, Col. E. VINCENT V., *Newnham Court, Tenbury (Worce.).*
 1918 WICKHAM-BOYNTON, T. L., *Burton Agnes Hall, Driffield (York, E. Riding).*
 1926 WRIGHT, ROBERT, *Beckfield, Heighington, Lincoln (Lincolnshire).*

* Nominated Members of Council.

STANDING COMMITTEES.

* * * Under Bye-Law 73, the PRESIDENT is a Member *ex officio* of all Committees, and the TRUSTEES and VICE-PRESIDENTS are Members *ex officio* of all Standing Committees except the Committee of Selection and General Purposes.

The Honorary Director is a Member ex officio of all Committees.

Finance Committee.

ADEANE, C. (<i>Chairman</i>)	BURRELL, Sir MERRIK R.	HARRISON, W.
DEVONSHIRE, Duke of	COURTHOPE, Sir G. L.	MANSELL, ALFRED
NORTHBROOK, Earl of	BURKE, U. ROLAND	WHEELER, Col.
CORNWALLIS, Lord	CRUTCHLEY, PERCY	
DARESBURY, Lord	GREAVES, R. M.	

Journal and Education Committee.

CORNWALLIS, Lord*	COURTHOPE, Sir G. L.	DAMPIER-WHETHAM,
(<i>Chairman</i>)	HAZLERIGG, Sir A. G.	W. C. D.
BLEDISLOE, Lord	ADEANE, C.	MANSELL, ALFRED
FITZWALTER, Lord	BROCKLEBANK, Rev. C. H.	NEAME, T.
MILDMAY OF FLETE, Lord	BURKITT, W.	PRICE, F. HAMLYN
RUSSELL, Sir JOHN	COLTMAN-ROGERS, C.	WHEELER, Col.
BURRELL, Sir MERRIK R.		

Chemical Committee.

BROCKLEHURST, H. D.	FALCONER, J.	PATTERSON, R. G.
(<i>Chairman</i>)	GATES, B. J.	REA, G. G.
BLEDISLOE, Lord	GREAVES, R. M.	SAMPLE, C. H.
HARLECH, Lord	HALE, W. E.	SILCOCK, T. B.
RUSSELL, Sir JOHN	NEAME, T.	SMITH, FRED
BURKITT, W.	NEILSON, R. B.	
DAMPIER-WHETHAM, W.C.D.	OLIVER-BELLASIS, Capt. R.	

Botanical and Zoological Committee.

COLTMAN-ROGERS, C.	COURTHOPE, Sir G. L.	DAWSON, W.
(<i>Chairman</i>)	HAZLERIGG, Sir A. G.	LOYD, A. T.
CORNWALLIS, Lord	ASHTON, T. W.	WHEELER, Col.
FITZWALTER, Lord	BROCKLEHURST, H. D.	
HASTINGS, Lord	CHRISTY, Capt. H. A.	

Veterinary Committee.

BURRELL, Sir MERRIK R.	WEIGALL, Sir A. G.	JOHNSTONE, Capt.
(<i>Chairman</i>)	ASHTON, T. W.	G. H.
NORTHBROOK, Earl of	BEHRENS, Major CLIVE	MANSELL, ALFRED
FOLKESTONE, Viscount	BURKE, U. ROLAND	MATTHEWS, F. P.
HASTINGS, Lord	BUXTON, Capt. H. G.	SILCOCK, T. B.
MILDMAY OF FLETE, Lord	CRUTCHLEY, PERCY	SMITH, FRED
STRACHIE, Lord	FENWICK, E. GUY	STANYFORTH, Lt.-
PARKER, Hon. C. T.	GATES, B. J.	Col.
COTTERELL, Sir JOHN	HARRIS, JOSEPH	TANNER, E. C.
GILBEY, Sir WALTER	HOBDAI, Prof. F. T. G.	THORNTON, F. H.

Committee of Selection and General Purposes.

NORTHBROOK, Earl of	HARLECH, Lord	HAZLERIGG, Sir A. G.
(Chairman)	MILDMAY, Lord	GREAVES, R. M.
THE PRESIDENT	COURTHOPE, Sir G. L.	

And the Chairman of each of the Standing Committees.

Research Committee.

DEVONSHIRE, Duke of	BURRELL, Sir MERRIK R.	GREAVES, R. M.
(Chairman)	RUSSELL, Sir JOHN	MATTHEWS, R. B.
FOLKESTONE, Viscount	WEIGALL, Sir A. G.	NEAME, T.
BLEDISLOE, Lord	ADEANE, C.	SMITH, F.
CORNWALLIS, Lord	BURKITT, W.	TOMKINSON, Major
HASTINGS, Lord	DAMPIER-WHETHAM, W.C.D.	WIGAN, Capt. D. G.

Stock Prizes Committee.

BURKE, U. R. (Chairman)	EVENS, JOHN	NEILSON, R. B.
NORTHBROOK, Earl of	EVERARD, W. L.	PAGET, L. O.
DARESBUURY, Lord	FENWICK, E. GUY	REA, G. G.
BURRELL, Sir MERRIK R.	FORSYTH, T.	SILCOCK, T. B.
COTTERELL, Sir JOHN	GREAVES, R. M.	SMITH, FRED
BEHRENS, Major CLIVE	HOBBS, ROBERT	TANNER, E. C.
BROCKLEBANK, Rev. C. H.	LOYD, A. T.	WEBB, FRANK
BURKITT, W.	MANSSELL, ALFRED	WICKHAM-BOYNTON,
BUXTON, Capt. H. G.	MORTIMER, H. P.	T. L.
CRUTCHLEY, PERCY	MYATT, JOHN	The Stewards of
DUDGEON, Major C. R.	NEAME, T.	Live Stock

Judges Selection Committee.—Same as Stock Prizes Committee.

Implement Committee.

STANYFORTH, Lt.-Col.	EVENS, JOHN	RANSOME, E. C.
E. W. (Chairman)	FALCONER, J.	SAMPLE, C. H.
COURTHOPE, Sir G. L.	GARRETT, Col.	WHEELER, Col.
BURKE, U. R.	GREAVES, R. M.	The Steward of
BURKITT, W.	HARRISON, W.	Implements
BUXTON, Capt. H. G.	MATTHEWS, R. B.	
CRUTCHLEY, PERCY	MYATT, JOHN	

Showyard Works Committee.

DARESBUURY, Lord	BURKE, U. ROLAND	PAGET, L. C.
(Chairman)	BURKITT, W.	REA, G. G.
BURRELL, Sir MERRIK R.	CRUTCHLEY, PERCY	SAMPLE, C. H.
HAZLERIGG, Sir A. G.	HALL, J. H.	STANYFORTH, Lt.-
BELL, JOHN	NEILSON, R. B.	Col.

Dairy and Produce Committee.

BURKITT, W. (Chairman)	CRUTCHLEY, PERCY	OLIVER-BELLASIS,
FITZWALTER, Lord	DAMPIER-WHETHAM, W.C.D.	Capt. R.
STRACHIE, Lord	EVENS, JOHN	SILCOCK, T. B.
BURRELL, Sir MERRIK R.	GREAVES, R. M.	WHEELER, Col.
WEIGALL, Sir A. G.	HALE, W. E.	WILLIAMS, Prof. R.
ASHTON, T. W.	JOHNSTONE, Capt. G. H.	STENHOUSE

Horticultural Committee.

HAZLERIGG, Sir A. G. (Chairman)	DARESBUURY, Lord	BESANT, J. G.
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General Harrogate Committee.

The Whole Council, with the following representatives of the Local Committee :—

THE MAYOR OF HAR-	COLLINS, Col. W. F.	TAYLOR, J. TURNER
ROGATE	FAWKES, Maj. F. H.	(<i>Town Clerk and Hon.</i>
BAIN, ALD. SIR A.	MACKINTOSH, Sir Harold	<i>Local Secretary</i>)
ERNEST, K.B.E.		

Honorary Director.—LORD DARESBURY, C.V.O.

Secretary.—T. B. TURNER, 16 Bedford Square, W.C.1.

Editor of Journal.—C. J. B. MACDONALD, *West End Farm, Cheddington, Leighton Buzzard.*

Consulting Chemist.—DR. J. AUGUSTUS VOELCKER, M.A., 1 Tudor St., E.C.4.

Consulting Veterinary Surgeon.—Prof. F. T. G. HOBDAY, C.M.G. F.R.C.V.S., *Royal Veterinary College, Camden Town, London, N.W.1.*

Botanist.—Prof. Sir R. H. BIFFEN, F.R.S., *School of Agriculture, Cambridge,*

Zoologist.—CECIL WARBURTON, M.A., *School of Agriculture, Cambridge.*

Consulting Engineer.—DR. B. J. OWEN, *Institute of Agricultural Engineering, St. Giles, Oxford.*

Surveyor.—CHARLES H. R. NAYLOR, *Smith's Bank Chambers, Derby.*

Publisher.—JOHN MURRAY, 50A Albemarle Street, W.1.

Solicitors.—GARRARD, WOLFE, GAZE & CLARKE, 18 St. James's Place, S.W.1.

Bankers.—WESTMINSTER BANK, LTD., 1 St. James's Square, S.W.1.

DISTRIBUTION OF GOVERNORS AND MEMBERS OF THE SOCIETY, AND OF ORDINARY MEMBERS OF THE COUNCIL.

ELECTORAL DISTRICT	DIVISION	NUMBER OF GOVERNORS AND MEMBERS	NUMBER OF ORDINARY MEMBERS OF COUNCIL	ORDINARY MEMBERS OF COUNCIL
A:	BEDFORDSHIRE	101	1	Frank Webb.
	CHESHIRE	601	4	J. H. Hall; H. P. Mortimer; R. B. Nelson; Major C. W. Tomkinson.
	CORNWALL	93	1	Capt. G. H. Johnstone.
	DERBYSHIRE	245	1	U. Roland Burke.
	DORSET	103	1	A. Hiscock.
	HAMPSHIRE AND CHANNEL ISLANDS . .	317	2	T. W. Ashton; J. Falconer.
	HERTFORDSHIRE	200	1	Col. Abel H. Smith.
	LANCASHIRE AND ISLE OF MAN	405	2	Windham E. Hale; T. B. Silcock.
	MIDDLESEX	78	1	R. R. Robbins.
	MONMOUTHSHIRE	148	1	Col. Sir Edward Curre.
	NORFOLK	372	2	Capt. H. G. Buxton; Lord Hastings.
	NORTHAMPTONSHIRE	220	1	F. H. Thornton.
	NORTHUMBERLAND	324	2	G. G. Bea; C. H. Sample.
	STAFFORDSHIRE	277	2	John Myatt; R. G. Patterson.
	WORCESTERSHIRE	188	1	Col. E. V. V. Wheeler.
	YORKSHIRE, N.R.	282	1	Major Clive Behrens.
	SCOTLAND	302	2	Major C. R. Dudgeon; W. S. McWilliam.
F:	—4,256		—26	
	BUCKINGHAMSHIRE	183	1	B. J. Gates.
	DEVON	174	1	Lord Mildmay of Flete.
	DURHAM	213	1	W. Burkitt.
	ESSEX	274	1	Sir Walter Gilbey.
	HERTFORDSHIRE	188	1	Sir John R. G. Cotterell.
	LEICESTERSHIRE	239	1	W. Lindsay Everard.
	LONDON	519	3	F. P. Matthews; F. Hamlyn Price; Lieut.-Col. Sir A. G. Weigall.
	NOTTINGHAMSHIRE	243	1	Thomas Forshaw.
	RUTLAND	44	1	E. Guy Fenwick.
	SHROPSHIRE	353	2	Alfred Mansell; E. Craig Tanner.
	SUFFOLK	260	1	Fred Smith.
	SURREY	211	1	R. Borlase Matthews.
	WILTSHIRE	198	1	Viscount Folkestone.
	YORKSHIRE, W.R.	299	2	Col. Rt. Hon. G. R. Lane-Fox; Leopold C. Paget.
	SOUTH WALES	135	1	Capt. H. A. Christy.
C:	—3,536		—19	
	BERKSHIRE	245	1	A. T. Loyd.
	CAMBRIDGESHIRE	209	1	Rev. C. H. Brocklebank.
	CUMBERLAND	145	1	Joseph Harris.
	GLAMORGAN	118	1	Hubert Alexander.
	GLOUCESTERSHIRE	317	2	Lord Bledisloe; H. D. Brocklehurst.
	HUNTINGDONSHIRE	39	1	Sir Douglas Newton.
	KENT	361	2	Lord Fitzwalter; Thomas Neame.
	LINCOLNSHIRE	376	2	John Evans; Robert Wright.
	OXFORDSHIRE	200	1	Robert Hobbs.
	SOMERSET	182	1	Lord Strachie.
	SUSSEX	376	2	Sir Merrik R. Burrell; Col. Sir G. L. Courthope.
	WARWICKSHIRE	247	1	Capt. R. Oliver-Bellasi.
	WESTMORLAND	93	1	Jacob Wakefield.
	YORKSHIRE, E.R.	128	1	T. L. Wickham-Boynton.
	IRELAND	70	1	Edward Bohane.
	NORTH WALES	290	2	Major W. Marshall Dugdale; Major E. J. W. Platt.
	—3,396		—21	
	FOREIGN COUNTRIES	244		*W. C. D. Dampier-Whetham.
MEMBERS WITH NO ADDRESSES . .		30	4	*Col. Frank Garrett.
GRAND TOTALS		11,462	70	*E. C. Ransome. *Sir John Russell.

* Nominated Members of Council.

TABLE SHOWING THE NUMBER OF GOVERNORS AND MEMBERS
IN EACH YEAR FROM THE ESTABLISHMENT OF THE SOCIETY.

Year ending with Show of	President of the Year	Governors		Members			Total
		Life	Annual	Life	Annual	Honor- ary	
1838	8rd Earl Spencer	86	189	146	2,484	5	1,100
1840	6th Duke of Richmond	86	231	231	4,047	7	2,890
1841	Mr. Philip Pusey	101	211	325	5,194	15	4,595
1842	Mr. Henry Handley	94	209	429	6,155	15	5,249
1843	4th Earl of Hardwicke	95	214	442	6,161	15	5,902
1844	3rd Earl Spencer	94	198	527	5,899	15	6,927
1845	6th Duke of Richmond	92	201	554	6,105	19	6,738
1846	1st Viscount Portman	91	195	607	5,478	20	6,971
1847	6th Earl of Egmont	93	186	648	5,387	21	6,891
1848	2nd Earl of Yarborough	89	178	582	4,643	20	6,385
1849	3rd Earl of Chichester	90	189	627	4,556	19	5,512
1850	4th Marquis of Downshire	81	162	674	4,175	19	5,261
1851	5th Duke of Richmond	93	168	711	4,764	19	5,121
1852	2nd Earl of Ducale	90	147	739	3,928	19	4,983
1853	2nd Lord Ashburton	88	146	771	4,152	20	4,928
1854	Mr. Philip Pusey	89	141	795	3,838	19	5,177
1855	Mr. William Miles, M.P.	85	139	889	3,896	20	4,882
1856	1st Viscount Portman	83	137	896	3,933	19	4,979
1857	Viscount Oslington	81	138	904	4,010	18	5,068
1858	6th Lord Berners	78	130	927	4,008	18	5,146
1859	7th Duke of Marlborough	72	119	927	4,047	18	5,161
1860	6th Lord Walsingham	84	90	1,113	3,328	18	5,183
1861	3rd Earl of Powis	83	97	1,151	3,475	17	4,633
1862	H.R.H. The Prince Consort 1st Viscount Portman	80	88	1,263	3,735	17	4,823
1863	Viscount Eversley	78	45	1,343	4,013	17	5,133
1864	2nd Lord Feversham	79	81	1,386	4,190	16	5,496
1865	Sir E. C. Kerrison, Bart., M.P.	79	84	1,395	4,049	15	5,752
1866	1st Lord Tredegar	77	82	1,388	3,903	15	5,622
1867	Mr. H. S. Thompson	75	74	1,409	3,888	15	5,465
1868	6th Duke of Richmond	75	78	1,417	3,884	17	5,461
1869	H.R.H. The Prince of Wales, K.G.	74	74	1,511	3,864	17	5,446
1870	7th Duke of Devonshire	72	74	1,589	3,896	17	5,436
1871	6th Lord Vernon	71	73	1,655	3,953	14	5,648
1872	Sir W. W. Wynne, Bart., M.P.	74	62	1,832	3,936	12	5,738
1873	3rd Earl Cathcart	76	58	1,944	3,756	12	5,916
1874	Mr. Edward Holland	79	79	2,058	3,918	11	5,846
1875	1st Viscount Bridport	83	78	2,164	4,013	11	5,145
1876	2nd Lord Chesham	81	76	2,239	4,073	17	6,349
1877	Lord Skelmersdale	81	72	2,322	4,130	26	6,486
1878	Col. Kingscote, C.B., M.P.	81	72	2,458	4,700	26	7,837
1879	H.R.H. The Prince of Wales, K.G.	83	70	2,673	5,083	20	8,692
1880	9th Duke of Bedford	85	69	2,765	5,041	19	7,929
1881	Mr. William Wells	82	71	2,849	5,059	19	8,099
1882	Mr. John Dent Dent	78	71	2,979	4,952	19	8,099
1883	6th Duke of Richmond and Gordon	72	72	3,203	5,408	21	8,776
1884	Sir Brandreth Gibbs	71	69	3,356	5,619	20	9,135
1885	Sir Massey Lopes, Bart., M.P.	70	61	3,414	5,569	20	9,184
1886	H.R.H. The Prince of Wales, K.G.	71	64	3,440	5,387	20	8,982
1887	Lord Egerton of Tatton	66	56	3,521	5,225	16	8,884
1888	Sir M. W. Ridley, Bart., M.P.	73	58	3,567	5,153	15	10,886
1889	Her Majesty Queen Victoria	122	88	3,846	6,941	17	10,984
1890	Lord Moresby	117	80	3,811	6,921	19	10,923
1891	2nd Earl of Ravensworth	111	89	3,784	7,066	20	11,050
1892	1st Earl of Feversham	107	74	3,786	7,138	21	11,126
1893	1st Duke of Westminster, K.G.	113	78	3,793	7,212	22	11,218
1894	8th Duke of Devonshire, K.G.	120	80	3,747	7,179	23	11,149
1895	Sir J. H. Thorold, Bart.	126	88	3,695	7,258	23	11,180
1896	Sir Walter Gilbey, Bart.	126	83	3,705	7,386	24	11,223
1897	H.R.H. The Duke of York, K.G.	121	79	3,687	7,182	25	11,094
1898	5th Earl Spencer, K.G.	116	75	3,656	7,009	25	10,879
1899	Earl of Coventry	111	71	3,625	6,832	24	10,866
1900	H.R.H. The Prince of Wales, K.G.	102	70	3,564	6,338	27	10,933
1901	3rd Earl Cawdor	100	69	3,500	5,955	26	9,850
1902	H.R.H. Prince Christian, K.G.	99	62	3,439	5,771	27	9,398
1903	H.R.H. The Prince of Wales, K.G.	96	68	3,375	5,906	32	9,477
1904	16th Earl of Derby, K.G.	89	78	3,212	5,768	33	9,170
1905	9th Lord Middleton	94	155	3,132	6,189	30	9,000
1906	Mr. F. S. W. Cornwallis	91	174	3,076	6,299	29	9,689
1907	4th Earl of Yarborough	89	178	3,019	6,442	30	9,758
1908	9th Duke of Devonshire	91	177	2,951	6,596	31	9,846
1909	7th Earl of Jersey, G.C.B.	85	168	2,805	7,191	30	10,079
1910	Sir Gilbert Greenall, Bart.	85	170	2,741	7,283	30	10,309
1911	His Majesty King George V.	89	168	2,691	7,474	26	10,448
1912	9th Lord Middleton	89	173	2,626	7,629	28	10,546
1913	Earl of Northbrook	88	184	2,517	7,313	28	10,130
1914	4th Earl of Powis	83	185	2,427	7,526	27	10,245
1915	Duke of Portland, K.G.	93	210	2,412	8,214	26	10,955
1916	7th Duke of Richmond and Gordon	102	224	2,595	8,226	25	10,972
1917	Mr. Charles Adeane, C.B.	119	236	2,411	8,558	24	11,348
1918	Hon. Cecil T. Parker	127	275	2,374	10,098	24	12,068
1919	Sir J. B. Bowen-Jones, Bart.	144	287	2,317	10,596	22	13,366
1920	H.R.H. The Prince of Wales, K.G.	153	293	2,282	10,778	20	13,506
1921	Mr. Ernest Mathews, C.V.O.	159	289	2,201	10,676	21	13,946
1922	Sir Gilbert Greenall, Bart., C.V.O.	153	291	2,160	10,949	15	13,573
1923	Lord Desborough, G.C.V.O.	155	276	2,103	10,251	15	12,900
1924	Viscount Tredegar, C.B.E.	153	257	2,085	9,843	15	11,803
1925	Lord Harlech, C.B.	155	277	1,972	9,042	16	11,462

STATEMENT made to the Council by the Chairman of the Finance Committee, on presenting the Accounts for the year 1928.

Mr. ADEANE said that owing to the depletion of the Society's balances in order to meet the loss on the Newport Show, the Society began the year 1928 with a balance of only £419. The total receipts last year, inclusive of the balance, amounted to £19,594. The total payments were £15,693, giving a credit balance at the end of the year of £3,901; so that the Society had made good way towards recovering the position in which it stood at the commencement of the year 1927. It was to be regretted that annual subscriptions again showed a shrinkage of £318 as compared with the previous year, although as a set-off there was an increase of life compositions amounting to £653. The membership of the Society decreased by 339 during 1928. That position was not satisfactory, and pointed to the necessity of continued efforts to maintain the membership of the Society. Turning to the balance-sheet, it would be noticed that whereas at the end of 1927 the capital and reserve fund stood at £131,581, at the end of 1928 it stood at £141,896, showing an increase of £10,315, made up for the great part by the surplus on the Nottingham Show, the contribution from the ordinary account, the increase of life compositions, and the appreciation on investments. The invested reserve fund now stood at £127,624, and was especially valuable in view of the loss of income, amounting to £1,100 a year, due to a reduced membership.

As to the estimated receipts and expenditure for 1929, the receipts had been estimated at £17,430 and the expenditure at £17,091, giving an estimated surplus of receipts over expenditure of £339. Under the head of exceptional expenditure, there was a large increase of £800, part of the cost of bringing out the new edition of Fream's book, "Elements of Agriculture." With regard to scientific research, the Finance Committee was providing £2,000, in the hope that the Research Committee would again be economical and leave them a balance between the amount voted and actual expenditure, which could be used for the purpose of meeting the grant of £1,000 to the University of Cambridge.

FORECAST OF ORDINARY RECEIPTS AND EXPENDITURE FOR 1929

(Other than in respect of the Show).

Actual figures for 1928.		Estimate for 1929.
£	<i>Receipts.</i>	£
10,954	Subscriptions of Governors and Members	10,850
386	Interest on Daily Balances	330
5,538	Interest on Investments	5,538
199	Sales of Journals, Text Books, Pamphlets, etc.	200
241	Advertisements in Journal	240
52	Income Tax refunded	52
—	Miscellaneous	—
137	N.D.D. Entry Fees, etc.	150
49	Hire of Council and Committee Rooms	70
<u>17,556</u>		<u>17,430</u>
£	<i>Expenditure.</i>	£
4,146	Salaries :—Secretary and Official Staff	4,811
290	Pensions to Officials	290
866	Rent, Lighting, Cleaning, Wages, etc. (say)	900
605	Printing and Stationery	600
149	Postages and Telegrams	170
203	Miscellaneous	210
1,579	Journal	1,750
413	Chemical Department	420
250	Botanical Department	250
200	Zoological Department	200
423	Veterinary Department	400
100	Grant to Research Institute, Reading University	100
100	Consulting Engineer	100
355	Examinations for National Diplomas (R.A.S.E. share)	350
3,500	Amount set aside towards loss on Shows	3,500
<u>18,179</u>		<u>18,551</u>
£	<i>Exceptional Expenditure.</i>	£
1,617	Scientific Research	2,000
—	Painting and Repairs to Society's House	50
57	Repairs to Society's Furniture	100
32	Library: Binding and Purchase of Books	100
290	Legal Charges and Auditors' Fees (say)	400
3	Certificates and Medals for Long Service and Skilled Labour	15
24	Printing Farm A/c books, etc.	75
189	"Elements of Agriculture"	800
50	Grant to Joint Committee of British Live Stock Breeders	—
<u>15,441</u>		<u>17,091</u>
	Estimated Receipts	£17,430
	Estimated Expenditure	17,091
	Estimated Surplus of Receipts over Expenditure	£339

STATEMENT OF RECEIPTS AND EXPENDI- JULY 10 to

Corresponding figures for 1927. £	Receipts.		£ s. d.		£ s. d.	
2,000	Subscription from the Corporation of Nottingham				2,000	0 0
2,082	Prizes given by Agricultural and Breed Societies and others	2,090	15	6		
1,418	Prizes given by Nottingham Local Committee	1,441	0	0		
					3,531	15 6
3,500						
29	Contributions to Show Fund				12	10 0
	FEES FOR ENTRY OF IMPLEMENTS:—					
9,656	Implement Exhibitors' payments for Shedding and Space, (including World's Dairy Congress Building)	12,930	12	0		
246	Non-Members' Fees for entry of Implements	234	0	0		
162	Fees for entry of "New Implements"	80	0	0		
					18,244	12 0
10,064						
	FEES FOR ENTRY OF LIVE STOCK:—					
4,671	1,720 Members' Entries @ 3l.	5,178	0	0		
—	1 Member's Entry @ 2l.	2	0	0		
1,728	1,381 Members' Entries @ 30s.	2,071	10	0		
340	360 Members' Entries @ 1l.	360	0	0		
30	49 Members' Entries @ 15s.	36	15	0		
11	47 Members' Entries @ 10s.	23	10	0		
19	69 Members' Entries @ 5s.	17	5	0		
46	54 Entrance fees	54	1	0		
348	71 Non-Members' Entries @ 6l.	426	0	0		
102	46 Non-Members' Entries @ 3l.	188	0	0		
28	9 Non-Members' Entries @ 2l.	18	0	0		
—	12 Non-Members' Entries @ 30s.	18	0	0		
9	20 Non-Members' Entries @ 1l.	20	0	0		
1	21 Non-Members' Entries @ 10s.	10	10	0		
—	12 Non-Members' Entries @ 5s.	3	0	0		
16	Local Classes	—				
					8,376	11 0
7,349						
	FEES FOR ENTRY OF POULTRY:—					
102	Members:—616 Entries @ 5s.	154	0	0		
240	Non-Members:—420 Entries @ 10s.	210	0	0		
8	Entrance fees	15	1	0		
					379	1 0
350						
	OTHER ENTRY FEES:—					
135	Produce	140	5	0		
127	Horse-jumping Competitions	131	0	0		
67	Plantations Competition	32	1	0		
12	Orchards and Fruit Plantations Competition	18	0	0		
3	Timbering Competition	—				
					316	6 0
344						
	CATALOGUE:—					
24	Extra lines for particulars of Implement exhibits	21	6	0		
6	Woodcuts of "New Implements"	6	5	0		
1,076	Advertising in Catalogue	1,128	17	4		
35	Sales of Implement Section of Catalogue	37	18	6		
744	Sales of Combined Catalogue	936	9	4		
44	Sales of Jumping Programmes and Awards	55	7	8		
1,929		2,186	3	5		
66	Less:—Expenses of Sales Superintendent and Assistants	74	2	2		
					2,112	1 3
1,863						
£25,499	Carried forward				£29,973	16 9

TURE OF THE SHOW AT NOTTINGHAM,

JULY 14, 1928.

Corresponding figures for 1927.

Expenditure.

		COST OF ERECTION AND MAINTENANCE OF SHOWYARD:—£ s. d. £ s. d.			
3,872	Transferring Society's permanent buildings from Newport to Nottingham (including taking down and re-erecting)	3,908	10	4	
1,290	Fencing round Showyard	1,111	8	4	
2,374	Implement Shedding and World's Dairy Congress Building	3,877	17	4	
6,717	Stock Shedding	7,708	1	7	
536	Poultry and Produce Sheds	534	3	11	
671	Dairy	665	19	4	
124	Fodder Shed and Office	138	1	3	
255	Education and Forestry	281	13	0	
870	Grand Stand and Large Ring	874	16	3	
1,023	Various Offices and Stands	1,000	4	2	
300	Painting Signs and Fixing Ditto, Fencing and Judging Rings	370	17	2	
96	Insurance	96	12	9	
4	Ironmongery				
3,208	Hire of Canvas	2,853	9	8	
1,633	General Labour (including Society's Clerk of Works) and Horse Hire	1,560	17	2	
51	Bee Shed	52	12	0	
108	Extra Entrances to Show				
32	Clean Milk Demonstration	32	10	0	
107	Horse-Shoeing Shed	106	15	8	
165	Additional Paving and Levelling for Buildings	428	3	8	
23,436		25,602	13	5	
38	Less 76 Flagpoles @ 10s.	38	0	0	
23,398					25,564 13 5
SURVEYOR:—					
555	Salary, £500; Travelling Expenses to London, etc., £28 7s. 0d. Clerk, £10 10s.; Petty Expenses, £16 16s. 0d.				555 13 0
PRINTING:—					
705	Printing of Prize Sheet, Entry Forms, Admission Orders, Circulars to Exhibitors, Prize Cards, Tickets and Miscellaneous (including stationery)	639	10	10	
44	Programmes for Members	43	5	4	
904	Printing of Catalogues	963	19	11	
207	Binding of Catalogues	222	16	1	
25	Carriage of Catalogues	21	16	8	
54	Printing Awards	85	5	0	
14	Programmes of Jumping Competitions	25	13	10	
1,953					2,002 7 8
ADVERTISING:—					
373	Advertising Closing of Entries in Newspapers	262	13	0	
499	Advertising Show in Newspapers	524	16	3	
530	Billposting	645	4	3	
157	Printing of Posters	98	9	0	
1,559					1,531 2 6
POSTAGE, CARRIAGE, &c.:—					
170	General Postage	201	13	1	
67	Postage of Badges to Members	63	17	8	
18	Carriage of Luggage, etc.	14	19	2	
255					280 9 11
AMOUNT OF PRIZES AWARDED,					
11,713	(Including £3,531 15s. 6d. given by various Societies and Nottingham Local Committee)				11,654 15 6
COST OF FORAGE FOR LIVE STOCK:—					
1,312	Hay, £394 4s. 10d.; Straw, £650 15s. 2d.; Green Food, £369 11s.				1,424 11 0
JUDGES' FEES AND EXPENSES:—					
594	Judges of Miscellaneous Implements, £37 18s. 8d.; Horses, £53 11s. 10d.; Cattle, £189 19s. 5d.; Sheep, £114 10s. 6d.; Pigs, £56 18s. 2d.; Poultry, £33 0s. 8d.; Produce, £42 4s. 3d.; Goats, £6 5s. 6d.; Luncheons, £69				603 10 0
36	Badges for Judges and other officials				58 8 0
87	Rosettes				74 16 3
£41,464					
Carried forward				£43,755	7 8

STATEMENT OF RECEIPTS AND EXPENDITURE

Corresponding figures for 1927.		Receipts (contd.).		£ s. d.		£ s. d.	
25,499	Brought forward					28,972	16 9
MISCELLANEOUS RECEIPTS:—							
816	Admissions to Flower Show	1,274	6	5			
533	Garage	1,086	15	2			
185	Rent for Railway Offices	148	0	0			
75	Premium for Cloak Rooms	75	0	0			
232	Rent for Ministry of Agriculture Pavilion	232	10	0			
340	Advertisements in Stock Prize Sheet	322	13	6			
10	Sale of Manure						
23	Miscellaneous	4	6	0			
—	Bath Chairs	7	2	0			
2,214					3,150	13	1
ADMISSIONS TO SHOWYARD:—							
594	Tuesday, July 10, @ 10s..	1,183	0	0			
1,566	Wednesday, July 11, @ 5s.	4,476	17	6			
1,843	Thursday, July 12, @ 3s..	6,489	5	3			
1,459	Friday, July 13, @ 3s.	2,169	11	5			
966	Saturday, July 14, @ 1s.	1,387	8	1			
166	Season Tickets	188	3	0			
1,588	Day Tickets	500	1	6			
8,182					16,894	6	9
ENTRANCES TO HORSE RING:—							
177	Wednesday, July 11	261	19	0			
221	Thursday, July 12	294	10	0			
132	Friday, July 13	123	12	0			
114	Saturday, July 14	83	6	0			
290	Tickets sold for Reserved Enclosure	662	14	10			
934					1,426	1	10
SALES:—							
168	Sales of Produce at Dairy				146	8	3
—	Outstanding receipts in respect of Reading (1926) Show				6	1	4
36,997							
10,827	Debit Balance						
£47,824							
		£51,096 8 3					

Examined, audited, and found correct, this 12th day of November, 1928.

T. B. TURNER, Secretary.
PRICE, WATERHOUSE & Co.,
Chartered Accountants.

OF THE SHOW AT NOTTINGHAM (continued).

Corresponding figures for 1927.

£41,464

Expenditure (contd.).

£ s. d. £ s. d.

Brought forward 43,755 7 3

GENERAL ADMINISTRATION:—

191	Stewards:—Personal and Railway Expenses	177	8	9
355	Assistant Stewards:—Personal and Railway Expenses	315	10	6
500	Official Staff:—Extra Clerks, £193 5s. 3d.; Lodgings, £42 6s. 6d.; Maintenance of Staff, £73 7s. 5d.; Travelling Expenses, £18 4s. 11d.; Secretary's Hotel and Travelling Expenses (including Honorary Director's Expenses), £146 7s. 2d.	473	11	3
223	Finance Office:—Finance Clerk, £11 8s. 6d.; Grand Stand Men, £71 0s. 2d.; Turnstile Men, £49 1s. 5d.; Bank Clerks, £52 9s.; Hire of Car and Pony and Trap, £8 19s.; Refreshments, £12 10s. 4d.	205	14	5
79	Awards Office:—Clerks, £61 9s. 10d.; Boys, £18 9s.	79	13	10
		1,252	3	9

1,348

General Management:—

204	Foremen and Assistant Foremen	185	16	0
64	Yardmen	77	8	11
160	Door and Gate Keepers	189	0	8
245	Garage:—Construction costs, Offices, and Charges re Land	130	0	2
121	Veterinary Department:—Veterinary Inspectors	113	12	0
123	Engineering Department:—Consulting Engineer	110	0	0
1,037	Police:—Metropolitan Police, £1,068 18s. 3d.; Commissionaires, £56 14s. 2d.; Refreshments, £18 18s. 4d.	1,146	5	9
		1,951	18	6

1,954

Dairy:—Staff, £248 7s. 1d.; Milk, £200 10s.; Ice, £24 15s.; Utensils, £248 9s. 1d.; Salt, £2 2s. 10d.; Engineers, £98 16s. 3d.; Butter Tests, £32 11s. 2d.; Labour, £18 9s. 10d.; Milk Analysis, £10 6s.; Butter and Cheese Boxes, £5 0s. 9d.; Refreshments, £25 13s. 10d.; Fuel, £8 4s. 3d.; Miscellaneous, £14 7s. 9d.

932 12 10

Analysis of Cider

9 10 0

Poultry:—Penning and Feeding, £78 2s. 7d.; Carriage, £18 17s. 6d.

97 0 1

1,039 2 11

Flower Show:—Hire of Tents, £439 6s. 10d.; Judges, £20 11s. 9d.; Wages, £50; Medals, £54 15s.; Labour, £29 1s. 11d.; Carriage and Cartage, £19 10s.; Miscellaneous, £17 18s. 3d.

681 1 9

Plantations Competition

89 2 8

Orchards and Fruit Plantations Competition

74 0 5

GENERAL SHOWYARD EXPENSES:—

319	Band and Amplifier	290	0	0
277	Hire of Furniture	350	0	0
15	Telephone and Call Boxes	29	3	8
22	Telegraph Facilities	23	9	0
28	Official Luncheons	113	15	0
60	St. John Ambulance	64	17	9
15	Billposting in Showyard	10	10	0
16	Medals	15	9	6
39	Engraving and forwarding Cups	37	12	6
29	Plans and Maps	14	4	6
47	Ashes	1	0	4
67	Education and Forestry	65	2	0
15	Tan	7	12	5
106	Sleepers	247	5	4
8	Hire of Tents and Marquee	28	15	0
4	Carriage—Sundry Items	—	—	—
13	Weighbridge: Carriage and Erection Charges	19	10	0
—	Bath Chairs	19	11	6
112	Miscellaneous	95	4	0
15	Gas, Coal and Firewood	23	7	4
—	Charges for Mowing	69	4	6
		1,525	14	4

1,207

Outstanding accounts from Newport Show 5 14 5

Credit Balance £50,374 6 0

732 2 0

£47,824 £51,096 8 0

Credit balance (as above)

£732 2 9

Add Contribution from Ordinary Account to Show Fund

£3,500 0 0

£4,232 2 9

Figures for
1927.
£

Receipts.

	£	s.	d.	£	s.	d.	£	s.	d.
CASH AT BANKERS AND IN HAND, JANUARY 1, 1928:—									
731 Reserve Fund Account				15	0	0			
4,767 Current Account				235	11	6			
130 Cash in Hand				168	4	5			
5,628							418	15	11

ANNUAL SUBSCRIPTIONS:—

1,397 <i>Governors'</i> for 1928	1,531	18	0
9,673 <i>Members'</i> for 1928	9,339	15	0
176 Subscriptions for previous years	56	11	0

LIFE GOVERNORS AND MEMBERS:—

25 Annual Contributions	25	7	0
11,271	10,958	11	0

MISCELLANEOUS:—

5,538 Interest on Investments	5,537	13	10
218 Interest on Daily Balances	385	16	1
78 Income Tax repaid	52	4	6
55 Sales of Pamphlets, Farm Account Books, etc.	47	6	8
x Sales of Library Catalogue	1	8	0
80 Sales of Text Books	53	14	11
138 Sales of Journals	91	16	0
241 Advertisements in Journal	241	7	5
203 N.D.D.: Entry Fees and Sales of Exam. Papers	137	2	7
66 Hire of Council and Committee rooms	49	7	0
6,618	6,602	17	0
17,889 Total of Ordinary Receipts	17,556	8	0

363 Life Compositions of Governors and Members	1,016	0	0
104 Donations to Society's Funds	103	15	0
130 Subscriptions for 1929	159	4	0
267 Cash received in respect of payments to Willesden Urban District Council	234	4	3
6 Show Account: for amount owing on Dec. 31, 1927	5	7	1
5 Amount realised on Sale of Plant	50	12	6
895	1,619	2	10

Rent, 12 Hanover Square	264	0	0
Less Rent paid	264	0	0

£24,412

£19,594 8 9

PAYMENTS FOR THE YEAR 1928.

xv

Figures for 1927.

£

3,961

301

324

900

644

150

196

6,476

1,034

311

239

21

1,605

10

418

250

200

150

400

100

3

1,103

282

89

72

63

16

7

75

604

459

145

73

72

91

91

40

17

239

1,595

47

6

9

177

34

190

66

500

2,624

3,500

16,047

27

487

7,327

99

6

7,946

224,412

Payments.

GENERAL ADMINISTRATION:—

	£	s.	d.	£	s.	d.	£	s.	d.
Salaries: Secretary and Official Staff (including clerical assistance)	4,146	8	4						
Pensions to Officials	289	11	8						
Legal Charges and Auditors' Fees	289	16	0						
Rent, Rates, Taxes, Insurance and House Expenses	866	8	7						
Printing and Stationery	605	8	4						
Postage and Telegrams	149	8	11						
Advertising and Miscellaneous Office Expenses	192	7	7						
							6,539	9	5

JOURNAL OF THE SOCIETY:—

	£	s.	d.	£	s.	d.	£	s.	d.
Cost of Volume 88:—									
Printing and Binding	995	4	9						
Postage	293	12	1						
Editing and Literary Contributions	230	11	0						
Illustrations	9	17	6						
							1,579	5	4

Advertising Farm Account Books							9	12	6
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LABORATORY:—

Salary and Petty Cash							412	19	10
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OTHER SCIENTIFIC DEPARTMENTS:—

Botanist's Salary	250	0	0						
Zoologist's Salary	200	0	0						
Consulting Engineer	100	0	0						
Grant to Royal Veterinary College & Presentation Plate	420	0	0						
Grant to Research Institute, Reading	100	0	0						
Medal for Proficiency in Cattle Pathology	2	19	6						
							1,072	19	6

NATIONAL DIPLOMA IN AGRICULTURE:—

Honoraria and Expenses of Examiners	307	19	3						
Travelling Expenses of Officials	82	19	11						
Hotel Expenses of Examiners and Officials	125	13	11						
Printing, Stationery and Postage	57	14	11						
Writing and Printing Diplomas	54	17	3						
Hire of Premises	7	7	0						
Salary for Assistant	75	0	0						
							711	12	3

Less Entry Fees and Sales of Examination Papers							511	7	0
---	--	--	--	--	--	--	-----	---	---

							200	5	3
--	--	--	--	--	--	--	-----	---	---

Less amount paid by Highland and Agricultural Society							99	14	0
---	--	--	--	--	--	--	----	----	---

							100	11	3
--	--	--	--	--	--	--	-----	----	---

NATIONAL DIPLOMA IN DAIRYING:—

Hire of Premises, etc.	47	19	10						
Fees and Travelling Expenses of Examiners	124	6	6						
Hotel and Travelling Expenses	43	18	11						
Printing and Postage, etc.	37	14	10						
(For Entry Fees, and Sales of Exam. Papers, see contra.)							254	0	1

EXTRA EXPENDITURE:—

Grant to Research Fund	1,617	0	3						
Library: Binding and Purchase of Books	31	13	7						
Grant to Joint Committee of British Live Stock Breeders	50	0	0						
Repairs to Furniture	57	5	0						
Certificates and Medals for Long Service	3	9	0						
Printing Farm Account Books and Booklets	—								
Reprinting Fream's "Elements of Agriculture"	189	0	0						
Printing "Occasional Notes" (Ives Sales)	24	7	3						
Re-wiring Electric Lighting Installation	—								
Painting and cleaning exterior of House	—								
Grant to Royal Veterinary College rebuilding Fund	—								
							1,972	15	6

							3,500	0	0
--	--	--	--	--	--	--	-------	---	---

Amount set aside towards Loss on Shows							15,441	13	5
--	--	--	--	--	--	--	--------	----	---

Total of Ordinary Payments							—		
----------------------------	--	--	--	--	--	--	---	--	--

Cost of repairing Fire Damage							225	5	2
-------------------------------	--	--	--	--	--	--	-----	---	---

Payments to Willesden Urban District Council							—		
--	--	--	--	--	--	--	---	--	--

Net amount transferred from Ordinary and Reserve Fund							25	0	0
---	--	--	--	--	--	--	----	---	---

Accounts to Show Account to meet loss on Newport Show							1	4	1
---	--	--	--	--	--	--	---	---	---

Additions to Show Plant							251	9	3
-------------------------	--	--	--	--	--	--	-----	---	---

Postage, etc., re Show Account									
--------------------------------	--	--	--	--	--	--	--	--	--

CASH AT BANKERS AND IN HAND, DECEMBER 31, 1928:—

Reserve Fund Account	1,081	0	0						
----------------------	-------	---	---	--	--	--	--	--	--

Current Account	2,313	5	6						
-----------------	-------	---	---	--	--	--	--	--	--

University Grant Account	382	19	9						
--------------------------	-----	----	---	--	--	--	--	--	--

Cash in Hand	178	18	10				3,901	4	1
--------------	-----	----	----	--	--	--	-------	---	---

£19,594 0 9

Examined, audited and found correct,

PRICE, WATERHOUSE & Co.,

Chartered Accountants,

Accountants & Auditors.

3 FREDRICK'S PLACE,

OLD JEWRY, LONDON, E.C.2.

22nd February, 1929.

ROYAL AGRICULTURAL

Dr.

BALANCE SHEET,

Figures for 1927.		£	s.	d.	£	s.	d.	£	s.	d.
£	To SUNDRY CREDITORS—									
2,602	Sundry accounts owing				2,802	13	1			
150	Subscriptions received in 1928 but belonging to 1929				159	4	0			
2,752								2,961	17	1
	To CAPITAL and RESERVE FUND:—									
135,145	As at December 31, 1927.				131,581	2	8			
	SHOW FUND—									
10,827 (loss)	Surplus on Nottingham Show.	722	2	0						
3,500	Contribution from Ordinary account	3,500	0	0				4,222	2	0
7,327										
363	Life Compositions received in 1928				1,016	0	0			
104	Donations towards the Society's Funds				103	15	0			
169	Subscriptions for 1928 received in 1927				149	12	0			
1,842	Excess of ordinary receipts over payments for the year 1928				2,114	14	7			
2,141	Appreciation on Investments				3,501	15	4			
132,437					142,689	1	7			
205	Less Adjustment in respect of outstanding Assets and Liabilities				232	7	3			
132,232					142,456	14	4			
	DEPRECIATION written off, viz.:—									
15	Fixtures	13	9	9						
36	Furniture	32	15	0						
45	Machinery: balance written off on sale									
455	Show Plant	414	3	5						
100	Lease of 16 Bedford Square	100	0	0						
651					500	8	2			
131,581								141,896	6	2
	NOTE—There are commitments in respect of Con- tracts entered into in connection with the forthcoming Show.									
£134,333								£144,858	3	8

T. B. TURNER,
Secretary,

SOCIETY OF ENGLAND.

xvii

DECEMBER 31, 1928.

Cr.

Figures for 1927.		£	s.	d.	£	s.	d.
£	By RESERVE FUND—						
112,779	146,465 <i>l.</i> 13 <i>s.</i> 7 <i>d.</i> Conversion Loan 3½ per cent.(1961) @ 79¼*	116,074	1	0			
500	500 <i>l.</i> War Savings Certificates*	658	6	8			
2,531	3,909 <i>l.</i> 16 <i>s.</i> Local Loans 3 per cent. (1912) @ 65½*	2,551	2	10			
	2,840 <i>l.</i> 13 <i>s.</i> 6 <i>d.</i> Metropolitan 3 per cent. Consolidated						
2,372	Stock (1941) @ 84½*	2,400	7	5			
5,941	6,528 <i>l.</i> 1 <i>s.</i> 6 <i>d.</i> Canadian 4 per cent. Stock (1940-1980) @						
	91*	5,940	11	0			
124,123	* Market Value at 31 Dec. 1928.				127,624	8	11
	By LEASE OF 16 BEDFORD SQUARE	900	0	0			
900	Less Amount written off in 1928	100	0	0			
					800	0	0
	By FIXTURES, FITTINGS, etc.—						
	As at December 31, 1927	179	16	7			
180	Less Depreciation at 7½ per cent.	13	9	9			
					166	6	10
	By FURNITURE—						
	As at December 31, 1927	327	9	3			
328	Less Depreciation at 10 per cent.	32	15	0			
					294	14	3
1,571	By PICTURES (500 <i>l.</i>) and BOOKS (1,071 <i>l.</i> 4 <i>s.</i> 10 <i>d.</i>)				1,571	4	10
	By SHOW PLANT—						
	As at December 31, 1927	4,192	6	3			
	Less Sold	50	12	6			
		4,141	13	9			
	Less Depreciation at 10 per cent.	414	8	5			
		3,727	10	4			
4,192	Added during 1928	25	0	0			
					3,752	10	4
2,158	By EXPENDITURE (less amounts received) ON HARRO- GATE SHOW				2,065	18	10
450	By SUNDRY DEBTORS				397	8	1
70	By RATES PAID IN ADVANCE AND INCOME TAX RECOVERABLE				70	8	8
	By CASH AT BANKERS AND IN HAND—						
	ORDINARY ACCOUNT—						
15	Reserve Fund Account	1,081	0	0			
236	Current Account	2,313	5	6			
—	University Grant Account	382	19	9			
—	Deposit Account.	4,222	2	0			
168	Cash in Hand	173	18	10			
419		8,123	6	1			
58	Less Show Account—Overdrawn	7	18	5			
361					8,115	12	8
134,333					144,858	3	3

Examined, audited and found correct.

3 FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
22nd February, 1929.

PRICE, WATERHOUSE & Co.,
Chartered Accountants,
Accountants & Auditors.

STATEMENTS OF FUNDS HELD BY THE SOCIETY IN TRUST OR WHICH ARE NOT CONSIDERED AVAILABLE FOR GENERAL PURPOSES, DECEMBER 31, 1928.

E. H. HILLS' BEQUEST.

To amount bequeathed for Pot-culture Experiments	£	s.	d.	
Less : Depreciation of Consoles at time of conversion	£	s.	d.	
„ Cost of conversion	£	s.	d.	
	3,582	7	11	
	134	14	7	
	3,717	2	0	
To surplus on sale of 5% War Loan Stock	£	s.	d.	
	5,282	17	6	
	333	4	4	
	£5,616	1	10	

QUEEN VICTORIA GIFTS FUND.

£	s.	d.
To Fund invested (the income from this Fund is used to make Annual Grants to unsuccessful applicants for pension through the Royal Agricultural Benevolent Institution)	5,000	0
Undistributed Income	97	5 9
By Investments in names of Trustees; at cost:		
1,000 <i>l.</i> Dominion of Canada 3% Inscribed Stock.	1,062	14 0
1,000 <i>l.</i> Victorian Government 5% Inscribed Stock 1932-1942	1,070	4 4
1,000 <i>l.</i> New South Wales Government 5% Inscribed Stock, 1935-55	1,095	5 6
1,000 <i>l.</i> London Midland & Scottish Railway Consolidated 4% Guaranteed Stock	1,556	15 9
190 <i>l.</i> 4 <i>s.</i> 6 <i>d.</i> 2½% Consols	215	0 5
By Cash at Bank, December 31, 1928	5,000	0 0
	97	5 9
	<u>£5,097</u>	<u>5 9</u>
The market values of the Stocks on December 31, 1928, amounted to £3,737.		

STATEMENT OF FUNDS HELD BY THE SOCIETY IN TRUST—continued.

GILBEY FUND.

To Amount provided by the late Sir Walter Gilbey for endowment of Lectureship at Cambridge University	£	s.	d.	By Investment at cost :—	£	s.	d.
Accumulation of Interest	1,000	0	0	1,457 <i>l.</i> 5 <i>s.</i> 2 <i>d.</i> Metropolitan Water "A" Stock	1,204	10	4
	204	10	4	(Value on December 31, 1928, at 66 = 96 <i>l.</i> 15 <i>s.</i> 9 <i>d.</i>)			
	<u>£1,204</u>	<u>10</u>	<u>4</u>		<u>£1,204</u>	<u>10</u>	<u>4</u>

SUPERANNUATION AND INSURANCE FUND.

To amount set aside in accordance with declaration of Trust of July 26, 1911	£	s.	d.	By Investments in names of Trustees, at cost :—	£	s.	d.
Less : Depreciation of Consols at time of conversion	1,837	18	4	8,817 <i>l.</i> 7 <i>s.</i> 1 <i>d.</i> 5% War Loan Stock (1929–1947)	8,244	3	8
Cost of conversion	256	3	0	577 <i>l.</i> 12 <i>s.</i> 5 <i>d.</i> West Australian 3½% Stock (1935–1955)	459	17	4
Cost of conversion	2,094	1	4	496 <i>l.</i> 10 <i>s.</i> 10 <i>d.</i> Queensland 3½% Stock (1950–1970)	374	9	9
Add : Purchase of 1,367 <i>l.</i> 14 <i>s.</i> 9 <i>d.</i> 5% War Loan Stock at cost	7,077	3	8		<u>£9,078</u>	<u>10</u>	<u>9</u>
	1,167	0	0	By Cash at Bank, December 31, 1928		496	13 3
	<u>8,244</u>	<u>3</u>	<u>8</u>				
Accumulation to December 31, 1928	1,164	12	4		<u>£9,575</u>	<u>4</u>	<u>0</u>
Income Tax payable on War Loan Stock Interest	176	8	0				
	<u>£9,575</u>	<u>4</u>	<u>0</u>				

The market values of the Stocks on December 31, 1928, amounted to 9,850*l.* 11*s.* 2*d.*

"MERCHANTS OF THE STAPLE OF ENGLAND" FUND.

To capital sum paid by the "Merchants of the Staple of England" for the purpose of providing out of the yearly income Prizes to be competed for annually in the Wool Section of the Royal Show	£	s.	d.	By Investment at cost :—	£	s.	d.
	500	0	0	503 <i>l.</i> 1 <i>s.</i> 9 <i>d.</i> New South Wales Government 5% Inscribed Stock, 1935–55	500	0	0
	<u>500</u>	<u>0</u>	<u>0</u>	(Value on Dec. 31, 1928, at 98 = 493 <i>l.</i> 0 <i>s.</i> 6 <i>d.</i>)			

Examined, audited and found correct,
PRICE, WATERHOUSE & Co.,
Chartered Accountants,
Accountants & Auditors.

3 FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
22nd February, 1929.

Royal Agricultural Society of England.

RESEARCH COMMITTEE.

RECEIPTS AND PAYMENTS FOR YEAR 1928.

RECEIPTS.		PAYMENTS.	
£	s. d.	£	s. d.
To Grant from General Account . . .	1,617 0 3	By Grants to Research Institute in Animal Pathology, Royal Veterinary College, for Research re Marmitis in Cows . . .	300 0 0
" Sales of copies of <i>Agricultural Research</i> . . .	50 11 6	" Grants to Rothamsted Experimental Station for Lucerne Seed Inoculation Experiments . .	300 0 0
		" Grants to Norfolk Agricultural Station for Malting Barley Experiments and Drill Trials . .	300 0 0
		" Grant to Leicestershire County Council Education Committee re Shoby Grassland Experiment .	100 0 0
		" Expenses incurred re Grass Seeding Experiment .	7 16 0
		" <i>Agricultural Research in 1926</i> —Postage and Printing Leaflet, etc.	8 6 0
		" <i>Agricultural Research in 1927</i> :—	
		Printing and Binding	202 7 1
		Honoraria to Contributors	350 0 0
		Postage	31 7 0
		Miscellaneous	11 15 8
		Editing, etc.	595 9 9
		" Miscellaneous Expenses	50 0 0
		" Miscellaneous Expenses	6 0 0
<u>£1,667 11 9</u>		<u>£1,667 11 9</u>	

FREDERICK'S PLACE,
OLD JEWRY, LONDON, E.C.2.
22nd February, 1929.

Examined, audited and found correct,
PRICE, WATERHOUSE & Co.,
Chartered Accountants,
Accountants & Auditors.

[Copies of the full Report of any of the Council Meetings held during the year 1928 may be obtained on application to the Secretary, at 16 Bedford Square, London, W.C.1.]

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

Minutes of the Council.

WEDNESDAY, FEBRUARY 1, 1928.

LORD HARLECH (President) in the Chair.

The PRESIDENT said that before commencing the ordinary business of the Council, it was his sad duty to refer to the loss they had all sustained in the death of the Seventh Duke of Richmond and Gordon. His long and extensive acquaintance with agriculture need not be emphasised. His connection with the Society was a lengthy one. He was elected a Member on April 13, 1904, a Member of the Council on August 1, 1905, and a Vice-President on June 30, 1915. He ably filled the office of President in the year 1916, when the Show was held at Manchester, a very difficult year during the war. It was the last Show during that period. The connection of the late Duke's family with this Society has existed from its foundation. The Fifth Duke was one of the original founders. His successor, the Sixth Duke, also took a keen interest in everything appertaining to the Society.

Not only did they deplore the death of a valued Vice-President, but the country generally is poorer through the loss of a keen and practical agriculturist and model landlord. The President did not think that he could quote better words than those he had read about him in *Country Life* this week. They said that he was a great nobleman, a great gentleman, and the best of landlords.

He would ask those present to rise in their seats to show their sympathy with the relatives of the late Duke.

Members rose in their places.

The PRESIDENT then said he felt sure that they would like him on this occasion to send their congratulations to Sir Edward Curre on the baronetcy recently bestowed upon him by the King. Sir Edward was an old pillar and support of this Society. If he could be forgiven for saying so, he thought that it would add very much to the interest and humour of their discussions if Sir Edward took part in them rather more often than he does. They heartily congratulated him. (Applause.)

The PRESIDENT then called upon the Secretary to read the following letter :—

STRAFFAN HOUSE,
STRAFFAN, CO. KILDARE.

DEAR SIR,—I am grateful in the extreme to you for your kind letter of sympathy to us in our overwhelming loss. My father always took a great interest in the business of the Society, and it is gratifying and helpful to know how much his work was appreciated and how intensely his loss has been felt by all who knew and worked with him.

Will you please convey to your Council the heartfelt thanks of my mother, myself and the whole family for their kind expression of sympathy.

Yours truly,
(Signed) F. B. BARTON.

To the Secretary,
Royal Agricultural Society of England.

Arising on the Minutes of the last meeting, the SECRETARY read the following letter which he had received from Lord Bledisloe:—

DEAR SIR,—I find that I am reported in the Press as having stated at the Council meeting of the Royal Agricultural Society of England on the 7th Dec. that the virus of foot-and-mouth disease could remain active "on the surface of the skin, although the carcasses were chilled, for something like thirty to thirty-five days." I intended to say that the virus could remain active on the outside of a carcass if kept at the normal temperature for three to five days.

Yours faithfully,
(Signed) BLEDISLOE.

The Council agreed to the amendment outlined in this letter of the Minutes of the last meeting of the Council, held on December 7. These were then taken as read, and confirmed.

H.R.H. Princess Mary, Viscountess Lascelles, C.B.E., and Lord Penrhyn were elected as Governors, and forty-six new members were admitted into the Society.

The PRESIDENT said he was sure that the Council would all be pleased to hear that H.R.H. Princess Mary had consented to become a Governor of the Society.

Mr. ADEANE moved the adoption of the Report of the FINANCE Committee, with the exception of the paragraph dealing with Park Royal, which, he said, he would deal with separately.

The motion was carried.

Mr. ADEANE then said he was afraid that he would have to ask the attention of the Council for a few moments to the matter of Park Royal. He would have to go back somewhat into the history of the Society in connection with the question because there were few present at the meeting who had had anything to do with the transactions of the Society in the old days—that is, before the new Charter of 1905.

In 1901 the Society bought Park Royal for the purpose of having a centre in which to hold its show near London. The place was very boggy, and nothing could be done with it until it was drained. The Society went to the Willesden Council, in whose area the land was situated, and asked them to drain the land. They said that they could not drain it because they had not sufficient fall. Consequently the Society went to the neighbouring Council—the Acton Council. They undertook to drain the land under an agreement, which was called the agreement of 1903, provided that the Society agreed to pay the excess rates—that is, the difference in the amount between the Acton rate and the Willesden rate for drainage. The Society entered into the agreement with Acton and Willesden, and it could not be broken except by the consent of all parties. As was well known, Park Royal was not a success and it was abandoned as far as the holding of the show was concerned in 1905, and the ground was sold in 1906 to a company called the Park Royal Estates Company. That company proceeded to sell the land to other companies and to individuals. They collected the drainage rate and paid it to Willesden. For some years all went very well, but unfortunately during the war period companies began to topple down and individuals went bankrupt, and in that way, through bankruptcies and liquidations, the chain of covenants with regard to indemnity was broken. When Park Royal Estates sold the land to different companies and individuals they received from them a covenant indemnifying the Society with regard to the payment of the rates. When they went bankrupt the covenant for indemnification went to the wall, and the Society was in this position: it was held liable under the agreement of 1903, for the payment of the rates on land which it no longer possessed. At present the Society paid the excess amount between the Acton rate and the Willesden rate, and applied to the Park Royal Estates, which also was in liquidation, for the amount. Park Royal Estates went round and collected as much as it could and handed it to the Society, and the Society was liable for the remainder.

For the last year the total excess rate amounted to £545, but the Society could only collect through Park Royal Estates £345 towards that amount, and consequently the loss for the year was £200. That, he thought, might be taken as a permanent average loss to the Society. It was quite bad enough, but the position might get worse. If those portions of the property which through liquidation or bankruptcy have broken the indemnity agreement are further developed, then the Society becomes liable to a drainage rate on their behalf. It was for that reason especially that the Finance Committee recommended the Council to cancel the agreement of 1903 if possible. That could only be done by the payment of a considerable sum. It was in order to obtain the leave of the Council for the payment of that sum that he brought the matter forward at the present meeting.

The sum to be found altogether was £12,000—£4,000 to enable the Willesden Council to disconnect the drain and drain the land themselves—that is, take it over altogether from Acton—and £8,000 compensation to the Acton Council for the work it had done and also for the loss of the drainage rate.

To meet that sum of £12,000 it was proposed that the Society should find £5,000. The Park Royal Estates had £2,000 which they would have to transfer to the Society at the end of their liquidation, and the excess drainage ratepayers had to find £5,000. The Solicitors had ascertained from all the excess ratepayers except three that they would be willing to purchase their freedom from all further liability by the payment of a sum equal to seventeen and a half years' purchase of their rate. That would give the Society the sum of £5,000 which was required.

There were only one or two obstacles to the settlement. The amount to be found by two of the three excess payers was small; but there was another one, a company, which was more important, the contribution of which would come to £1,000. That was one of the obstacles which had to be overcome. Willesden considered £4,000 quite ample for their purpose of disconnecting the drains, but would not assure the Society that that would be the maximum payment, and the Society must have an assurance before it proceeded. If the three ratepayers did not come into line, and if the Society could not get an assurance from Willesden with regard to the £4,000, the scheme would fall through.

The Finance Committee did not advise the Society to go beyond the figure of £5,000, but in view of the fact that the Society's irrecoverable liability was now £200 per annum, and might be more, it strongly recommended the Council to sanction the provision of a sum not exceeding £5,000. He would therefore move that the Finance Committee be authorised to expend a sum not exceeding £5,000 as the contribution of the Society to the sum required to cancel the agreement of 1903, and that the Society's Solicitors be authorised to settle an agreement determining the agreement of 1903, provided that the Willesden Council agree to limit their expenditure to £4,000 and the excess ratepayers agree to bear their share of the £12,000.

The motion was seconded by Mr. RICHARDSON CARR and carried.

In moving the adoption of the Report of the CHEMICAL Committee, Mr. BROCKLEHURST alluded to the exorbitant prices charged for certain condimental foods. He was afraid that in this world there would always be Simple Simons. When making purchases and signing contracts it was necessary that one should be very careful about putting his name to anything. The gentleman in the case quoted in the report had had to pay £10, a sum which was very much in excess of the value of the goods he had received.

Sir MERRIK BURRELL, in presenting the report of the VETERINARY Committee, asked to be allowed to leave out the resolution regarding foot-and-mouth disease.

With reference to the letter to the National Farmers' Union, he would like to make it quite plain that it was not being sent because the Veterinary Committee thought for one moment that that body had not already done everything that it possibly could to impress upon its members the necessity for immediate notification on the least suspicion of the existence of foot-and-mouth disease. The Committee knew that it had; but the Society had not the machinery through which it could get at the individual farmers throughout England, and the National Farmers' Union had. The letter was in no way one of criticism. It was merely asking the Union for its kind co-operation in once more bringing to the minds of farmers the urgent importance of notifying immediately. He moved the adoption of the report with the exception of paragraph 3.

The motion was carried.

Sir MERRIK BURRELL then moved:—

"That the Council of the R.A.S.E. fully agrees with the letter of the Ministry of Agriculture of January 3rd, and desires to call the attention of all the members of the Society to the extreme importance of immediate notification on the least suspicion of the existence of the disease, and is prepared to support the Ministry in any further steps it may deem wise to take to put an end to the concealment which is causing such widespread loss."

It seemed almost incredible, he said, that after all the years that the disease had been, at times, rampant up and down the country such a resolution should be necessary; but when it was stated by the Ministry that 17 per cent. of the recent outbreaks on farms had been concealed for some considerable period, in some cases for two or three weeks, it did once more become necessary to urge on farmers the importance, not of diagnosing the disease, but of giving immediate notification on the least suspicion of it. He thought that perhaps some farmers had an idea that until they were quite sure that they had the disease on their farms there was no necessity for them to report the matter. That was not so. Their responsibility was to call in a veterinary surgeon immediately on the very slightest suspicion.

It would be noticed that at the end of the resolution the Council were asked to say that they would be prepared to support the Ministry in the future in any further steps it might deem wise to take in order to stamp out the habit of concealment, which caused inconvenience and the loss of thousands of pounds to individuals and of many thousands of pounds to the country at large. The words meant that the Council would support any alteration in the present Act governing diseases of animals which would give the Ministry added powers to make the life of a man who concealed the disease extremely unpleasant. He did not wish to go in greater detail at the moment into what he meant by that; but some of the members of the Committee had ideas in their heads as to how that desirable state of affairs might be arrived at, and he said to the farmers with all seriousness that if they were not more careful the day might come when it might be necessary to press for very serious steps to be taken against people who did not report immediately the presence of disease. When he spoke like that he did not for one moment mean that farmers as a whole did not take great care in the matter; but there was undoubtedly a small minority who were either careless or selfish and who brought discredit on all the farming community in the eyes of the urban population.

The motion was seconded by Lord HASTINGS.

Mr. B. J. GATES wished to say a word, as the National Farmers' Union had been mentioned. He had been asked by a prominent member of the Union to suggest that before any drastic step was taken in the matter Sir Merrik Burrell should be requested to interview Mr. German, who was prepared to put all his cards on the table and say how far he had gone in regard to Foot-and-Mouth Disease and non-reporting. Mr. German was of the opinion that something further must be done in some

way or another to stop what was going on at the present time, and he would be delighted to meet Sir Merrik and possibly one other so that the matter might be gone into fully and some agreement arrived at about it.

The resolution was carried.

The Report of the SHOWYARD WORKS Committee having been presented, Lord DESBOROUGH said that, owing to the lamented death of Lord Kenyon, a vacancy had occurred in connection with the great Dairy Congress which was going to be held in London this year—he thought for the first time. He had been asked to step into the breach, and he had done so. He wished to express the hope that the Royal Agricultural Society would do everything in its power to further the success of the Congress. There would be a great many delegates coming from America. There would be papers read on milk production and milk distribution. Those papers would be in both French and English. He thought that the Congress would be an interesting one. Arrangements had already been made for it to have a large space at the Royal Show. As Chairman of the Congress, he hoped that it would work in entire harmony with the Royal Agricultural Society.

In moving the adoption of the Report of the COMMITTEE OF SELECTION AND GENERAL PURPOSES, the PRESIDENT expressed the hope that all the members of the Council would make a note of the alteration of the date of the Council Meeting in December (*December 12*).

Mr. MATTHEWS, in presenting the Report of the DAIRY AND PRODUCE Committee, expressed the pleasure of the Committee and of all the members at the fact that Lord Desborough had undertaken to fill the office of President of the World's Dairy Congress, which had become vacant owing to the death of Lord Kenyon.

In presenting the Report of the RESEARCH Committee, Sir MERRIK BURRELL referred to the completion of the Manuring of Barley experiment which had been carried out at the Norfolk Agricultural Station during the last five years. The experiment had been very largely financed by the Society. The report which had been received showed the interesting and valuable results of that work. The Committee felt that it was desirable that the information should be made available as soon as possible, and the Editor of the *Journal*, Mr. Macdonald, saw no reason why it could not be incorporated in the forthcoming volume of the *Journal*.

The Committee had also had before it an interim report on the further investigation into the Census of an acre of Barley. The Committee had not arrived at sufficiently clear results at present to make it wise to publish the interim report, but there was evidence of long steps forward having been taken, and there was so much valuable information in the interim report that the Committee were going to send it to the Implement Committee for its private information. He hoped that the members of that Committee would study it very carefully, because it was the desire of the Research Committee to work in co-operation with the Implement Committee in the matter.

Sir MERRIK BURRELL, in moving the adoption of the Report of the QUARANTINE STATION Committee, said that if any members of the Council wished to ask any questions about it he would be prepared to answer them.

Mr. F. P. MATTHEWS asked whether the £3 for maintenance which had been mentioned was for a week or for the whole time.

Sir MERRIK BURRELL replied that it was for the whole time.

The SECRETARY added that the quarantine period would be fourteen days. The fee was supposed to cover fourteen days. If for any cause an animal had to be kept longer it would be necessary to make an additional charge *pro rata*.

Sir MERRIK BURRELL said that it would be of enormous assistance to Sir Archibald Weigall and himself in choosing the staff for the Quarantine

tine Station if any member of the Council who personally knew of a really good man who he thought would fit the post would communicate with them. They would, no doubt, have to advertise, and they would probably be inundated with applications, and it might not be a very easy matter to choose exactly the right man. They would, of course, want a man who understood the management of all kinds of pedigree stock, and he must be a strong-minded man in order that he might see that the quarantine regulations were very strictly carried out. He must also be sufficiently well educated to be able to keep the necessary register quite clearly entered up, and to keep in intelligent communication with the Society's office. Such a man would not be quite easy to find; but he was sure that he would be found.

Sir ARCHIBALD WEIGALL said that it was necessary to bear in mind, in recommending a man, that the sort of man required was obviously one who had spent almost all his life in purely rural surroundings, and that he would have to come to London and spend his life in the neighbourhood of the Port of London Authority Docks. There was, therefore, a psychological aspect of the matter.

Lord MILDMAI asked whether it was possible to state the amount of remuneration contemplated.

Sir MERRIK BURRELL said that the suggested salary for the manager was £400 a year. He did not want a man who was prepared only to supervise; he wanted a man who was prepared to take an active part in the feeding of the animals and in the rough work. It was essential that the manager should have an intimate knowledge of feeding, and should be able to carry out the feeding.

On a motion from the Chair, the Common Seal of the Society was affixed to the contract with the Walker Weston Co. for the conversion of the premises for the Quarantine Station.

WEDNESDAY, MARCH 7, 1928.

LORD HARLECH (President), in the Chair.

The PRESIDENT said that before beginning the ordinary business of the Council he had two sad announcements to make. Members would, he knew, deeply regret to hear of the death of Mr. L. C. Wrigley on February 8th last. Mr. Wrigley became a member of the Council of this Society in 1908, and continued to represent the Monmouthshire Division until 1917, when he retired, owing to his removal into Gloucestershire. He did not, however, cease his active interest in the Society, but continued very materially to assist the Honorary Director at the Show as Steward of Sheep and Pigs. He was first appointed Steward in 1916, and had accepted the invitation of the Honorary Director to officiate again at the Nottingham Show this year. Those who worked in close connection with Mr. Wrigley well knew how valuable was his work as a Steward and what great service he rendered to the Society in that capacity. Not only did he serve the Society well, but he was gifted with special ability in getting the best out of herdsmen and other employees at the Show.

They had also lost a very active member of the Council in Mr. George P. Miln, who became a member of the Society in 1899. In 1922 Mr. Miln was elected to the Council as one of the representatives of Cheshire, and continued to serve on the Council right up to the time of his passing. He was actually present at the last meeting of the Council on February 1, and passed away after a very severe operation on Monday, February 13. He served on the Botanical and Zoological Committee and the Research Committee of the Society. He was, as they knew, specially

qualified for such service. His knowledge of all things pertaining to botanical matters and scientific research was profound, and he always kept himself up to date on such questions.

In the year 1925, when the Royal Show was held at Chester, Mr. Miln rendered the greatest help to the Honorary Director and also to the Local Committee. Although incapacitated for part of that year owing to an accident in London when he was on his way to attend one of their Council meetings, he never relaxed his interest in the work of the Chester Show, and when he found he would just be able to attend the Show with the assistance of crutches he was most delighted. Mr. Miln had many other activities connected with his business, and not only this Society but many agricultural institutions throughout the country will keenly feel his loss.

He would ask them to rise in their seats to signify their sympathy with the relatives of Mr. Wrigley and Mr. Miln and their deep sorrow at the passing of two gentlemen connected with the Council whose knowledge and interest they could ill spare.

Members rose in their places.

The PRESIDENT said that he had pleasure in announcing that Their Majesties the King and Queen would visit the Showground at Nottingham on the Wednesday, and that His Royal Highness the Prince of Wales would visit it on the Thursday.

Two new Governors and 52 new members were elected.

Mr. BROCKLEHURST, in moving the adoption of the CHEMICAL Committee's Report, referred to the Fertilisers and Feeding Stuffs Act, 1926. Provision was made in that Act for the drawing up of regulations, and an Advisory Committee, consisting of members of the trade and the farming and scientific interests concerned, had been studying and framing rules for the purpose. The Draft Statutory Rules now issued by that Committee came before the Chemical Committee on the previous day. The Committee had no suggestions as to alterations in the rules, and he thought he could say the arrangements were very satisfactory. A great many points that the Society had urged for a considerable number of years had been gained, and Dr. Voelcker had worked very well in the interests of agriculturists.

Sir MERRIK BURRELL, in moving the adoption of the report of the VETERINARY Committee, wished to mention a subject which was not alluded to in it. At their meeting yesterday more than one member of the Committee had alluded to the fact that at the Shire Horse Show many farmers had expressed the opinion that the authorities were very slow in acting on the reported cure which had come from France for foot-and-mouth disease. The Committee felt it would be a great pity, and indeed a danger, if the farming community jumped too quickly to the conclusion that a cure had been found from having read about it in the Sunday Press, and that farmers should be urged to have confidence in the veterinary authorities, to remember that those authorities could not possibly gamble in the very smallest degree in the matter, but must move with the greatest possible caution. Farmers ought to realise that even if a cure was found it would not remove the problem. The problem would not be solved until some preventive measure was found, and that was a very different thing from a cure.

Lord BLEDISLOE felt bound to make some comment upon the unfortunate publicity given in a certain Sunday paper regarding an alleged cure of foot-and-mouth disease, to which Sir Merrik Burrell had referred. During the time he served at the Ministry of Agriculture a very large number of alleged cures were brought to his notice, certain of them, no doubt, having something to recommend them as cures. As long as the national policy in relation to this disease was not to cure but to slaughter animals affected with it, there was obviously nothing to be

gained by drawing the attention of the public to alleged cures. On the other hand, as Sir Merrik Burrell pointed out, if anyone, having isolated the germ of the disease, was able to prepare a preventive serum for the purpose of inoculation, it would be of very great value in combating the disease in this country.

He did not know whether it was right to mention it, but he could not help being somewhat impressed by the fact that Dr. Huerta, Chief Veterinary Officer to the Government of Brazil and a very eminent veterinarian, professed to have found a preventive serum which undoubtedly was preventing the spread of rinderpest in Brazil, and had been tried in cases of foot-and-mouth disease. Undoubtedly, to his own knowledge, it was having very remarkable results. It might be premature to say anything about it, but it was in that direction that this country must look for the alleviation of its troubles in connection with the disease, and not to any alleged cure. He rather hoped opportunity would be taken to make clear in the same organ that unfortunately gave publicity to the alleged cure the opinions of the Royal Agricultural Society on the subject.

The EARL OF NORTHBROOK, in presenting the Report of the Committee of SELECTION AND GENERAL PURPOSES, referred to a letter from Sir John Russell on the question of resuming friendly relations with Germany. The Society had never passed a formal resolution stopping friendly relations with Germany, but at the commencement of the war resolved to have no communication with the German Agricultural Society during the continuance of the war. Sir John Russell pointed out that before the war the Society had friendly relations with the German Agricultural Society which were to the mutual benefit of both Societies. Sir John thought that the time had come when it would be to the advantage of both Societies if such friendly relations were resumed by the interchange of information received and by issuing invitations to Shows. He (the speaker) thought that something might be done on the lines suggested in the Report.

It would be seen that he asked for authority from the Council to write to Lord Lascelles formally inviting him to accept the Presidency of the Society for next year.

In moving the adoption of the Report of the QUARANTINE STATION Committee, Sir MERRIK BURRELL took the opportunity of thanking the members of the Council of the Society for the great help given to Sir Archibald Wiegall and himself by recommending various men who they thought would fill the post of Manager. The choice had to be made from over 1,000 applicants, and the task of choosing the last few was naturally a difficult matter. Many very good men applied, and the help received from members was of great value. He thought the man who was chosen would be able to fill this very responsible post efficiently. He was a man of great experience, and while with Sir Richard Cooper had acquired considerable experience in veterinary work and in quarantining animals, besides managing all kinds of stock. He had had to do experimental work where it was necessary to keep certain animals entirely separate from others, and quite realised the importance of it.

In regard to compulsory insurance, Sir MERRIK said that he had kept in touch with the insurance companies, and had every hope that the particular risk of slaughter by order of the Minister whilst animals were in the station would be insurable at a very reasonable premium. The associated societies would be meeting any day now, and he hoped shortly to have some definite information from them. The Quarantine Station would be completed by the end of this or the beginning of next month. It had been built as economical as possible, he hoped without the loss of any efficiency. The Committee thought that as it would be extremely difficult, once the station was open, for anybody to go to see it, an opportunity ought to be given to those particularly interested to see the place

before it was in use. Sir Archibald Weigall kindly approached Mr. Amery to see whether, if the Council thought fit to invite him, he would open the station on the afternoon after the next Council meeting, April 4th. Mr. Amery had kindly consented to do so. He hoped the Council would extend its invitation to Mr. Amery to open the station, and would themselves attend, if possible, to meet the Secretary of State for the Dominions.

Lord BLENDISLOE thought that now the scheme for the establishment of a Quarantine Station was approaching the stage of fruition the Council ought to express their profound thanks to Sir Merrik Burrell and Sir Archibald Weigall, particularly to Sir Merrik Burrell, for the trouble taken in carrying through the scheme. He thought it was no exaggeration to say that but for the energy, the enterprise and persistency of Sir Merrik Burrell this scheme would not have reached its present stage. For his own part, he was perfectly convinced that by creating confidence, as this station would do, in the minds of many of those overseas who were prepared and anxious to take the best of this country's pedigree stock, an immense boon would be conferred upon pedigree stockbreeders here.

In due course he would like to have an opportunity of saying something about the potentialities in this respect of Argentina; but he was perfectly convinced from his own observation during the last two months that there was immense scope for the transmission to South America of animals of the best possible stamp and of almost every description. It was acknowledged that in many parts of Argentina the type of bull in use to-day, coming in some cases from Normandy and other parts of the world, was of a distinctly inferior type to what used to be imported into that country from Great Britain, and he was certain that there was a greater and more hopeful outlook for trade with South America in almost every breed of cattle in this country, whether beef or dairy, than there had been at any time in the past. That would be so if only this great contribution could be ensured and a larger amount of money rendered available for the purchase of our best animals at best prices.

Lord HASTINGS suggested that when the invitations to attend the opening of the Quarantine Station were sent to members of the Council invitations might also be sent to one or more representatives of each of the Breed Societies, and possibly also to the representatives of recognised auctioneers dealing in pedigree stock. He thought that would be appreciated and that it might serve a useful purpose.

Mr. F. P. MATTHEWS, in supporting the adoption of the report, said he had known the successful candidate for the position of Manager for over twenty-five years, and was certain that senders of stock to the Quarantine Station might have every confidence that their animals would be well looked after and well treated. Ritchie was one of the best stockmen in the country, and was a very hard-working, straightforward and good man. He heartily congratulated Sir Merrik Burrell and Sir Archibald Weigall on having selected such a man.

Those who were more or less personally interested in the Quarantine Station for the export trade were somewhat perturbed at not being able to find out what Colonies would accept animals from the station. It had been stated by some of those applied to that their ports were still closed and that they had heard nothing about them being opened when the Quarantine Station was available. He wrote to the High Commissioner for South Africa about three weeks ago asking for something definite on the matter, but he had received no reply. When the Union Castle Line was approached with regard to the boats they had been asked to supply as soon as the Quarantine Station was available, they said they knew nothing about the station. Was it possible, therefore, to make a public announcement as to which of the Colonies would accept animals through the Quarantine Station as soon as it was open?

Sir MERRIK BURRELL, in reply to Lord Hastings, said that representa-

tives of Breed Societies, among many others, had already been placed on the list of invitations submitted to the Council. The Committee has asked Sir Archibald Weigall and himself to go into the details of the ceremony, and, if it was thought desirable that any particular person or persons should be invited, no doubt the Council would authorise invitations to be sent to them.

As to the Dominions which were prepared to accept cattle through the Quarantine Station, so far the only ones he definitely knew of were the Union of South Africa and Southern and Northern Rhodesia. The others were considering the point and had been doing so for a very long time. It was extremely difficult to force a definite answer out of a Government which was many thousands of miles away. In some cases the sanitary arrangements for animals in those places were in the hands of medical men who did not seem to know a very great deal about the diseases of animals. Mr. Jackson, of the Ministry of Agriculture, found great difficulty in convincing those people that they would be adequately and perfectly safeguarded by the system which was now being instituted. He would be seeing Mr. Jackson this afternoon and to-morrow, and he might have more definite information from the various Dominions. The matter, however, lay in the hands of the Dominions and not in the hands of the Society or of our own Government.

Lord MILD MAY wondered whether steps would be taken to ask the Press to give a prominent place to the opening of the Quarantine Station. It would be good propaganda.

Sir MERRIK BURRELL replied that representatives of the Press would be asked to attend.

The PRESIDENT was sure that it was the wish of the Council to confirm the invitation to the Secretary of State for the Dominions and Colonies, as suggested by Sir Archibald Weigall and Sir Merrik Burrell. He would make a point of attending the opening himself, and he hoped that as many members of the Council would be present as could find it convenient.

Notice was given in accordance with Clause 7 of the Original Charter that at the Council meeting on April 4th the President would move that the existing Bye-law 16 be rescinded and that the proposed addition to Bye-law 15 and the proposed new Bye-law 16 contained in the type-written document circulated to each member of Council on February 8th, 1928, and printed on the agenda paper for the Council Meeting on March 7th, be and the same are hereby enacted and be printed together with the other Bye-laws and the Charters of the Society.

On a motion from the Chair, the Seal of the Society was ordered to be affixed to (1) the agreement with the Harrogate Corporation in respect of the show to be held there in 1929; (2) the authority to the Westminster Bank, Ltd., for the inscription in the corporate name of the Society in the books of the Stock kept by the Westminster Bank, Ltd., of the £500 invested for prizes for wool given by the Merchants of the Staple of England; and (3) the certificates of honorary membership of the Society in the names of Sir Rowland Biffen, Sir William Somerville, and Sir Francis Floud, as sanctioned at the meeting of the Council held on February 1, 1928.

WEDNESDAY, APRIL 4, 1928.

LORD HARLECH (President) in the Chair.

The PRESIDENT said that before the Council meeting started he had regretfully to announce the death of Mr. Christopher Middleton, one of the members of Council for the Division of Durham, who died at his home on Wednesday, March 21, and was buried upon the following

Friday. Mr. Burkitt, the other member of Council for Durham, kindly undertook to represent the Council and the Society at the funeral.

The member whose death they now deplored joined the Society in 1881, and was elected a member of the Council at a General Meeting on May 30, 1904, which was before the Supplemental Charter was granted to the Society. After the grant of the Supplemental Charter, whereby members of the Society elected members of Council by vote, Mr. Middleton was re-elected to represent the Division of Durham. Throughout his long connection with the Council he served upon the Chemical and Implement Committees, and his experience and advice were highly appreciated by the Chairmen of those Committees. He was recognised as a leading agricultural expert, and gave evidence before several Royal Commissions relating to agricultural questions. He was also connected with the Farmers' Club, of which he had been Chairman, and with the British Dairy Farmers' Association.

He would ask the members to rise in their seats and to pass a vote of condolence with the relatives of Mr. Middleton in the loss they had sustained.

The members rose in their places.

Twelve new Governors and forty-eight new Members were elected.

In presenting the Report of the IMPLEMENT Committee, Colonel STANYFORTH said that his prediction of last month in regard to the entries of implements had been entirely fulfilled. From the money point of view the entries were practically equal to the entries for Newcastle, which were almost the largest the Society had ever had.

The PRESIDENT said that before the Report of the COMMITTEE OF SELECTION AND GENERAL PURPOSES was formally submitted, he would like to take the opportunity of welcoming to the Council Mr. Edward Bohane, the newly elected member for Ireland. Mr. Bohane had a great reputation. He had had a long and valued connection with the Royal Lancashire Agricultural Society as secretary, and now ably filled the position of Director of the Royal Dublin Society. He was sure Mr. Bohane's experience and advice would be readily placed at the disposal of the Council, and the Council would hope to benefit by them.

The EARL of NORTHBROOK, in moving the adoption of the Report, wished to refer briefly to the resignation of Sir John McFadyean, which terminated a connection with the Society which had existed for a very large number of years. Sir John's first association with the Royal Agricultural Society commenced in the year 1889, when the Society decided to make an annual grant to the Veterinary College for the purpose of establishing a Chair of Comparative Pathology and Bacteriology. Sir John became the Professor of Comparative Pathology at the College, and in 1892 he was elected a member of the Society's Veterinary Committee. He joined the Society as an ordinary member in 1893, and in 1901 he had conferred upon him the honour of being elected an Honorary Member of the Society in recognition of his exceptional services to agriculture. In July, 1904, Sir John was asked to accept, and did accept, the honorary office of Consulting Veterinary Surgeon to the Society.

Sir John had held for many years a distinguished position in the veterinary profession. He had done most valuable work both in research and in investigation into animal diseases, their cause and their treatment. His opinion had always commanded the greatest respect. There were few, if any, men who had done more in recent years for the advancement of veterinary knowledge and the practice of the veterinary art.

As he had had the honour of occupying for some time the position of Chairman of the Veterinary Committee he could say from his own knowledge how greatly that Committee had been indebted to Sir John McFadyean for the great help he had given it. His sound advice had always been at their disposal. Every member of the Committee would agree

with him when he said that Sir John had always shown to the Committee and every member of it the greatest courtesy and consideration. He had not only taken great pains to explain all the matters that came before the Committee, but he had always most willingly listened to any suggestions which any member of the Committee had desired to make, and he had given his most careful attention to those suggestions and had always been ready to give his advice on the matters concerned. He was sure that by Sir John's resignation the Society lost an old and most loyal and valuable servant.

The Committee desired to recommend to the Council that in recognition of Sir John McFadyean's forty years of honorary service to the Society he should be elected a Life Governor, and also that a piece of plate should be presented to him as a memento of his long association with the Society and in appreciation of the long and loyal services he had rendered. (Applause.)

Sir MERRIK BURRELL, in moving the adoption of the Report of the QUARANTINE STATION Committee, said that he had one short statement to make in supplement of the Report. As the Council would remember, he had informed it from time to time that he had been carrying on negotiations with the associated insurance companies in regard to the premium to be paid for covering the peculiar risk of the animals within the Quarantine Station being slaughtered by order of the Minister. The societies had not given an absolutely final decision, because their general meeting would not take place until about another ten days; but the thing was really settled. He had been on the telephone, and he was assured that the general meeting would give its final and formal assent. He thought that what would happen would be as follows:—They would issue a special policy in order that the owners of the animals might be quite free to insure with any company they liked for the transit risk or any other risk they liked to insure against, to cover the particular risk, at the rate of 1 per cent. on the purchase price plus any expenses incurred up to the time the animals were killed (he thought that that was quite fair) for twenty-one days, which should be ample cover for the time they were in the Quarantine Station. If by any chance the animals were detained in the Quarantine Station for a longer period than twenty-one days they would then charge at the rate of one shilling per cent. per day for animals kept there.

If there was any question that any member of the Council would like to ask him about the Quarantine Station he would be prepared to answer it.

LORD BLEDISLOE said that it occurred to him that the premium asked for by the insurance societies was somewhat large. A great many of the societies were, no doubt, rather daunted by the alarming announcements made from time to time in the Press as to what appeared to be the great prevalence of foot-and-mouth disease and other highly contagious animal diseases in this country; but he could not help thinking that in the light of further experience they would find it quite possible, with further considerable profit to themselves, to offer a very much lower rate than that which had been mentioned by Sir Merrik Burrell. He therefore suggested that any arrangement made should be of a provisional character, to be reviewed at a later date, say a year hence, or whatever might be a suitable period, in order to enable the Society possibly to make arrangements for insurance on very much more satisfactory terms than those which had been mentioned.

The PRESIDENT then moved, pursuant to notice:—

"That the existing Bye-law 16 be rescinded and that the proposed addition to Bye-law 15 and the proposed new Bye-law 16 contained in the typewritten document circulated to each member of Council on February 8, 1928, and printed on the agenda paper for the Council meeting on March 7th, be and the same are hereby enacted and be printed together with the other Bye-laws and the Charters of the Society."

The resolution was carried.

The amendments and additions are as below :—

Bye-law 15.—Add at end “and subject also to the provisions of Bye-law 16.”

Bye-law 16 (4).—Any Governor or Member (including an Honorary Foreign or Corresponding Member) who shall fall in the observance of any rule, regulation or bye-law of the Society, or shall conduct himself in a manner derogatory to or unworthy of the character of the Society, or prejudicial to its interests, may be removed from the Society in the following manner :—

Any complaint or allegation relating to any of the matters aforesaid against such Governor or Member (in this Bye-law hereinafter called “the said Member”) may be brought to the notice of the Council by any Committee.

The Council may thereupon refer the complaint or allegation either to some standing Committee or to a special Committee.

Such Committee shall as soon as practicable appoint a place and time for the consideration of the complaint or allegation. The said Member shall be informed in writing of the nature of the complaint or allegation against him, and shall be invited to attend in person before the Committee at the appointed place and time.

All the facts, documents and evidence in support of or in reply to the complaint or allegation shall be placed before the Committee, who shall generally arrange the procedure and conduct of the matter as they shall think proper.

The Committee shall as soon as practicable prepare and present to the Council a report summarising the matter and the evidence adduced, and shall state their findings upon such evidence and whether or not they recommend the removal of the said Member from the Society.

A copy of such report shall be sent to the said Member by registered post not less than seven days before it is presented to the Council.

If the report shall recommend the removal of the said Member, and if the Council shall by a vote of at least two-thirds of the members of the Council present and voting adopt the said report, then the said Member shall, *ipso facto*, be removed from being a Governor or Member of the Society; but he shall remain liable for any arrears of subscription or other sums due from him, and shall not be entitled to the return of any subscription or life composition already paid.

The said Member shall not be at liberty to retire from the Society between the dates of the first communication to the Council of the complaint or allegation and the final decision of the Council on the report of the Committee.

Any member of the Council who shall be a member of the Committee and attend the inquiry shall not be entitled to vote upon the report at any meeting of the Council, and if by inadvertence or otherwise he shall so vote his vote shall not be counted.

Written notice of the ultimate decision of the Council shall be given to the said Member as soon as practicable.

(B).—Any Governor or Member who shall have been expelled from any agricultural or breed society for conduct derogatory to or unworthy of the character of such society or prejudicial to its interests or objects shall, on the fact being brought to the notice of the Council, be removed from being a Governor or Member by a resolution to that effect passed by the Council; but such Governor or Member shall remain liable for any arrears of subscriptions or other sums due from him, and shall not be entitled to the return of any subscription or life composition already paid.

The fact that any Governor or Member has been expelled from any agricultural or breed society shall be sufficiently evidenced for the purpose of this Bye-law by a certificate to that effect from the secretary or some other official of such agricultural or breed society.

WEDNESDAY, MAY 2, 1928.

LORD HARLEIGH (President) in the Chair.

The PRESIDENT said that, before proceeding to the ordinary business of the Council, it was his sad duty to refer to the passing of Mr. Richardson Carr, who was so well known to all the members of the Council, and whose services to the Society had been incalculable.

Mr. Carr died very suddenly, after an attack of influenza, on April 18, and was buried at Burley in the New Forest the following Saturday. The Society was represented at the funeral by the Hon. E. G. Strutt and the Secretary, Mr. Turner. He was afraid the long illness from which Mr. Carr suffered in the years 1925 and 1926 must have so undermined his health that he had not sufficient strength to ward off the last attack; but all would remember how courageously he fought his long illness, and how well he looked at the last Council meeting. It was, consequently, all the more sad that he should have been taken from them so suddenly.

Mr. Carr became a member of the Society in 1889, and was elected to

the Council as the representative of Hertfordshire in 1905, and had since served continuously. He was a member of the Special Committee appointed in 1905 by the new Council to thoroughly investigate the entire position of the Society and to make a report to the Council as to what reforms and economies were considered desirable to put the Society on a sound footing. He also served on the Finance, Veterinary, Stock Prizes, Judges Selection, Showyard Works, Selection and General Purposes, and Dairy and Produce Committees, and was Chairman of the Stock Prizes and Judges Selection Committees.

Mr. Carr had acted as a Steward of Finance at the show since the year 1906, and his services to the Society in this capacity could not be estimated. The thoroughness with which the work was done at the show was a testimony to his devotion to his work and the zeal he always displayed; in fact—the PRESIDENT said—he had never come across a more conscientious worker. His singleness of purpose, his strength of character, and his loyalty and untiring devotion to the work of the Society would always remain in their hearts and minds as outstanding features of Mr. Carr's life and work.

To know Mr. Carr well was to have a great affection for him, and he had the capacity of endearing himself to all his friends.

Anyone who knew the affection existing between Mr. Carr and his daughter could realise the great bereavement she had sustained. They simply lived for each other. But it might be some comfort to her in her irreparable loss to know what a place Mr. Carr occupied in the esteem of members of the Council.

He would ask members to rise in their seats to show their sympathy with Mr. Carr's daughter in the great loss she had sustained.

The members rose in their places.

Fifteen Governors and sixty-five new Members were elected.

Mr. ADEANE, in presenting the report of the FINANCE Committee, drew the attention of the Council to the very generous annual subscription of 50 guineas which had been promised by the Westminster Bank. He would move a resolution of thanks to the Chairman of the Board, which he hoped the Council would adopt.

Sir MERRIK BURRELL moved the adoption of the VETERINARY Committee's report, with the exception of the resolution to the Ministry of Agriculture mentioned in the report, which he said he would like to move separately.

The report was received and adopted.

Sir MERRIK BURRELL then moved that:—

"The Council of the Royal Agricultural Society of England begs to urge on the Minister of Agriculture the desirability that all frozen or chilled meat imported from any country in which foot-and-mouth disease exists should be placed in cold storage at the ports in Great Britain, retained there, and not exposed on the market until sufficient time has elapsed for the virus of the disease possibly present in the marrow of the bones to have died."

He said that it had been learned within the last few months from the Committee which was investigating foot-and-mouth disease that the virus of that disease could live for somewhere about seventy-six days in the marrow of the bones of infected animals. It was obvious, therefore, that meat coming from countries in which the disease existed to any great extent brought the disease with it into this country. It was thought more and more as the months passed that that was one of the most serious of the means through which outbreaks of foot-and-mouth disease occurred in Great Britain. If it was thought necessary to quarantine animals which might possibly be infected with foot-and-mouth disease and to subject them to all kinds of very stringent conditions, it seemed only logical that meat which was probably infected should also be quarantined until sufficient time had elapsed for the virus to die. Scientific opinion at the present

moment said that was a period of seventy-six days, and the suggestion of the Committee was that such meat should be held up in cold storage at the ports in this country for a period of at least seventy-six days, counting the time occupied by the sea voyage, during which the meat would be in the ship's refrigerator.

He would propose that this resolution should be sent to the Minister of Agriculture for his consideration and that of His Majesty's Government. He thought it would also be wise and courteous to send a copy of it to Lord Ernle for his information before he raised the question in the House of Lords to-morrow.

Sir ARCHIBALD WEIGALL formally seconded the motion, which was adopted without discussion.

In the absence of the Earl of Northbrook, the PRESIDENT moved the adoption of the report of the SELECTION AND GENERAL PURPOSES Committee; and welcomed Mr. H. P. Mortimer on his first attendance as a member of the Council, and Professor Hobday, their new Consulting Veterinary Adviser.

He had also the pleasing duty of carrying out the wishes of the Council by making a presentation to Sir John McFadyean. He need not, he thought, enter into details of the services rendered by Sir John to the Council during the past thirty-six years, because they had been dealt with fully by Lord Northbrook at the last meeting, the minutes of which were before the Council. He would simply say that the Council felt it must recognise the valuable services Sir John had rendered. He would now make the presentation to Sir John, and would express the hope that he would live for many years to see the ornament on his sideboard and would hand it down to his posterity.

The presentation was then made.

Sir JOHN MCFADYVEAN, in returning thanks, thought he ought to begin by offering humble apologies for arriving late at the meeting owing to his car having broken down temporarily. He felt he would never be able adequately to express how thankful he was to the Council for the great honour it had done him in making him the recipient of this beautiful present and in deciding to elect him a Governor of the Society. He must disclaim ever having entertained any belief that such services as he might have rendered to the Society as a member of its Veterinary Committee would ever deserve such overwhelming recompense.

When the Royal Agricultural Society was incorporated in 1840 one of its declared objects in the Charter was to improve the veterinary art as applied to cattle, sheep and pigs. It might seem extraordinary at the present day that horses were omitted from that definition, but the fact was that from its foundation in 1793 up to that date the Royal Veterinary College had devoted itself almost entirely, or at least preponderantly, to the diseases of horses, and there was very great neglect of the diseases of other domesticated animals. In those circumstances he supposed it was assumed that the study of the diseases of horses did not require encouragement at the hands of the Royal Agricultural Society.

So far from the Society owing him anything for his services, he thought the debt was in the other direction. He had always felt that anything he could do was simply reducing the debt which the Royal Veterinary College, and indeed the whole veterinary profession, owed to the Society. Not only had the Society given a great impetus to the study of the diseases of animals in general and those of cattle, sheep and pigs in particular, but in many other directions, notably in financial support to the chief teaching institution in this country, the Society had done much to advance the knowledge of the veterinary art. He would like to mention the fact that the chair which he had had the honour of occupying at the Royal Veterinary College for thirty-five years was mainly instituted owing to a grant made by the Council of the Royal Agricultural Society,

and that was a very notable event in the history of veterinary education. It was a singular fact to look back upon that in 1892, even in medical education in London, no special chairs were devoted to the study of pathology.

A further debt which veterinary science owed to the Royal Agricultural Society was the financial help it had given for many years to the College, and notably its handsome subscription recently to the Rebuilding Fund of the College.

For all those reasons he had never thought he was doing anything except reducing the debt which the College owed to the Society. Besides that, his attendance at the meetings of the Veterinary Committee during the past thirty-five years was in the nature of a labour of love—(hear, hear)—first, because the business of the Committee was always engrossingly interesting to him, and, secondly, because of the kindness and consideration which he always received from the Chairman and members of the Committee. The business of the Committee, naturally, had been mainly concerned with the contagious diseases of domesticated animals, and the Committee had had, no doubt, a very responsible duty to discharge in advising the Council regarding the administration of the Acts and Orders dealing with those diseases.

He might be allowed to say that in his opinion the Council had played a very beneficent part in forming and guiding public opinion regarding such matters, and had worked patiently in connection with foot-and-mouth disease. He would be happy to think that any advice he might have given to the Society or to the Veterinary Committee was helpful in that direction. (Hear, hear.)

In conclusion, he asked the Council to accept his assurance that he had the highest appreciation of the great honour which had been conferred upon him. He valued the gift for itself, but mainly because it would be always, as long as he lived, evidence to him that he had been of some service to the Council, and he hoped that after that the present would be tenderly cherished by some member of his family. (Applause.)

Sir ARCHIBALD WEIGALL, in moving the adoption of the Report of the RESEARCH Committee, said that he was asked by that Committee to say how glad it would be if Col. Stanyforth could persuade any members of the Implement Committee to accompany those members of the Research Committee who were going to the Norfolk Agricultural Station in connection with the experiments on seed drills. The Research Committee were going to that station to satisfy themselves from one angle, and in view of the interest of the Implement Committee in such experiments it would, in the opinion of the Research Committee, short-circuit discussion and decision in the end if the Implement Committee could avail themselves of the opportunity of seeing the experiments from their angle.

Col. STANYFORTH said, in reply, that he could not possibly attend himself, but he hoped that if any members of the Implement Committee were able to attend they would take this as notice, and do their best to be present. Any details with regard to the visit could, no doubt, be obtained from the Secretary.

Sir ARCHIBALD WEIGALL said that the visit would take place on the 23rd May.

WEDNESDAY, JUNE 6, 1928.

LORD HARLECH (President) in the Chair.

Six Governors and ninety-seven new Members were elected.

LORD DARESBURY, in the absence of Mr. Adeane, moved the adoption of the Report of the FINANCE Committee. He wished, in doing so, to say

on Mr. Adeane's behalf that he apologised to the Council for not being in his place to-day. He (Lord Daresbury) believed that the present was the first occasion since Mr. Adeane had been Chairman of the Finance Committee upon which he had not attended a Council meeting. He had never seen the Derby in his life, and he thought that he ought to go to see it to-day.

The only other thing to which he wished to refer was the salary of the Secretary. The members felt how unfair it was to Mr. Turner that the matter should not be definitely settled. They had in Mr. Turner a servant whom it would be difficult to replace. He knew nobody who worked so hard or who had done so much for the Society as Mr. Turner had done since he had been Secretary. He was very sure that every member of the Council was only too pleased that Mr. Turner's salary had been raised to £1,600.

It was resolved, upon the motion of the PRESIDENT, seconded by Lord DARESBUURY, "That the Secretary be empowered to issue to any duly nominated candidate for membership of the Society, on receipt of the annual subscription, a badge admitting the candidate to the same privileges as a member during the forthcoming Show at Nottingham, the formal election of such candidate to be considered by the Council at their next ordinary meeting."

LORD CORNWALLIS, moving the adoption of the Report of the JOURNAL AND EDUCATION Committee, said that he thought he ought not to pass over in silence the new departure outlined in the Minutes of the Committee in reference to the amalgamation of the two Dairy Diploma Examinations hitherto held by the Highland Society and the Royal Agricultural Society on the one hand and the British Dairy Farmers' Association on the other. He was sure they all felt that the amalgamation would be a great improvement and that it would be very advantageous to all concerned. The members of the Council were very grateful to their representatives for having brought it about.

In presenting the Report of the CHEMICAL Committee, Mr. H. DENT BROCKLEHURST, on behalf of the Committee, congratulated Dr. Voelcker on the Birthday Honour he had received on the previous Monday for services, he believed, rendered some thirty-five years ago. He would like at the same time to congratulate Dr. Voelcker on the fact that he had lived for that very considerable period to receive a somewhat belated appreciation of his services. (Applause.)

Dr. VOELCKER, in acknowledging the congratulations, reminded the Council that it was with their permission, and as the representative of the Royal Agricultural Society, that he went out to India, and he desired to acknowledge the opportunity they had afforded him. It was a matter of satisfaction to know that the work he had done so long ago had been of value to the recent Royal Commission on Indian Agriculture.

SIR MERRIK BURRELL, in presenting a Report with reference to the QUARANTINE Station, wished to point out once more (he thought that the matter was one of very great importance) that the export of cattle from this country to the Dominions would not proceed as expeditiously as it should until the Dominions Governments and the Empire Marketing Board had arranged a scheme for subsidised freights. He had pointed out more than once that the matter was one of great urgency, because exporters were looking forward to the scheme coming into existence and were hanging back until it was in being. The matter could not be urged too strongly upon the Empire Marketing Board and upon the Dominions Governments.

SIR ARCHIBALD WEIGALL supported every word that Sir Merrik Burrell had said. There were hundreds of cattle which were ready to go, and which exporters were anxious to send; but, owing to the Empire Marketing Board not having yet implemented the definite recommendation of the Imperial Economic Committee as to the subsidising of freights, the whole

scheme was held up. Anything that the Council could do to galvanise the Empire Marketing Board into activity would be of tremendous service.

In moving the adoption of the Report of the IMPLEMENT Committee, Col. STANFORTH said he wished to refer to the report received from the Consulting Engineer in regard to the trial and inspection of the "silver medal" implements at the Show. The Report was a most valuable one. He had hardly expected that it would be received as soon as it had been, in the first year of the Society's new Consulting Engineer's work. He thought that Dr. Owen had been very quick. He had devoted a great deal of time to the matter. The presentation of the Report so early would be of enormous help to the judges. They would be able, before they attended the Show, to have practically all the questions that they would have to ask settled for them, and they would be able to have a great deal of knowledge of the implements at the Show before they went there. That would tend to make the judging for the silver medals very much more effective than it had been in the past. It would be possible after the first Show to say whether what was anticipated would be fulfilled. He had every hope that it would be. He was going with Mr. Evens to Norwich on Saturday to visit the Norfolk Agricultural Station, and if any other member of Council could come down he would be very glad. He would give him details directly after the present meeting of the Council.

In presenting the Report of the COMMITTEE of SELECTION AND GENERAL PURPOSES, the Earl of NORTHBROOK said that with reference to the appointment of a successor to Sir William Somerville, the representative of the Society on the Council of the Lister Institute of Preventive Medicine, he was glad to be able to report that Lord Mildmay had been good enough to consent to serve. (Applause.)

The Report of the RESEARCH Committee having been presented, a short discussion ensued as to the arrangement of the Report on the Sugar Beet Pulp Feeding Trials carried out for the Committee at the Norfolk Agricultural Station.

Sir MERRIK BURRELL said that the arrangement of the Report would be altered, and the conclusions would be put at the beginning.

The Research Committee's Report as amended was adopted.

The following Report was presented by the Trustees of the Queen Victoria Gifts Fund:—

Allowing for the rebate of income tax, which is now claimed and refunded annually by the Inland Revenue Authorities, the total annual income from the Fund's investments amounts to £174 15s. The cash at bank at present in the Fund's account amounts to £326 18s. 3d., this balance having grown to its present figure over a period of years; and in particular within the last few years in consequence of two of the Fund's original investments having matured and been replaced by investments yielding a higher annual return of interest.

The Trustees consider that the accumulated balance should be utilised to make an increased grant for the year 1928. They, therefore, recommend that the sum of £300 be devoted to gifts to twenty-three candidates in the classes and for the amounts named below, the distribution in each class to be left until after the election to pensions by the Royal Agricultural Benevolent Institution:—

CLASSES AND GIFTS

Male Candidates : 8 gifts of £10 each.

Married Couples : 7 gifts of £20 each.

Female Candidates : 8 gifts of £10 each.

In recommending this increased distribution the Trustees feel that the present time is opportune, particularly in view of the prevailing depression in agriculture; and they desire to mention that it represents the largest

annual grant made for the past twenty-one years. For nineteen years prior to 1926 the grant made was £140 each year, and for 1926 and 1927 £180 each year.

THURSDAY, JULY 12, 1928.

LORD HARLECH (President) in the Chair.

The PRESIDENT said that before proceeding with the ordinary business of the Council he would like to read the following letter which he had received from His Majesty's Equerry :—

WELBECK ABBEY,
WORKSOP,
NOTTS.
11th July, 1928.

DEAR LORD HARLECH,

I am commanded to congratulate you, the Honorary Director Lord Daresbury, and all concerned on the high standard of excellence both in exhibits and as regards the general arrangements of the Showyard, which Their Majesties had much pleasure in visiting today. The King and Queen greatly appreciated the loyal and friendly welcome accorded to them by the many thousands present in the grounds.

The King and Queen were much impressed with the wonderful collection of implements and mechanical appliances in the World's Dairy Congress Section as evidence of what science and engineering can do for this industry.

It is the King's earnest hope that the fine weather may continue, and that you may be able to record during your Presidency a highly successful Show.

Yours very truly,
(Signed) CLIVE WIGRAM.

The Secretary read a letter from Professor Hobday as to the present position of the Foot and Mouth Disease Research Committee's experiments in regard to the length of life of the disease virus.

The Secretary reported the receipt of the Judges' Awards in (1) the Plantations and Estate Nurseries Competitions, and (2) the Orchards and Fruit Plantations Competition. Authority was given for their publication.

On the motion of the PRESIDENT, seconded by Lord DARESBUURY, it was resolved :—

That the best thanks of the Society are due and are hereby tendered to :—

- (1) The Officials of the General Post Office for the efficient postal arrangements in connection with the Show.
- (2) The Chief Commissioner of Police for the efficient services rendered by the detachment of Metropolitan Police on duty in the Showyard.
- (3) The Chief Constable of Nottinghamshire for the efficient Police arrangements in connection with the Show.
- (4) The St. John Ambulance Brigade, No. 5 (North Eastern) District, for the efficient Ambulance Arrangements at the Show.
- (5) Messrs. Barclays Bank, Limited, Local Bankers, for the efficient services rendered by their Officials.
- (6) Messrs. Merryweather & Sons, Ltd., for the provision of Fire protection appliances, and for the efficient arrangements made by them in connection with the Fire Station in the Showyard.
- (7) Messrs. Henry Barker, Ltd., for decorating and furnishing the Royal Pavilion and for supplying furniture for Offices.
- (8) Messrs. Hodsons, Ltd., for providing Floral Decorations.
- (9) The Young Men's Christian Association for providing Refreshments and Reading and Writing Materials and for organising Welfare Work for Stockmen and Grooms in the Showyard.

Letters of thanks were also ordered to be sent to various individuals and firms for assistance kindly rendered, and for the loan of articles for the purposes of the Show.

A suggestion made by Major BEHRENS that in future the Show Catalogue should be issued in two parts was referred for consideration to the Stock Prizes Committee.

Mr. WM. HARRISON reported that several people had mentioned to him the advisability of some changes being made in the charges for admis-

sion to the Showyard, and he brought the matter before the Council in order that it might be considered by the appropriate Committee.

The SECRETARY outlined the procedure in this matter. It was, he said, one of the duties of the Local Committee's representatives on the General Nottingham Committee, who were familiar with such matters as the half-day closing, to suggest the charges to be made for admission each day, and it was on their recommendation that the charges were fixed.

It was decided that the question should be referred to the Finance Committee for consideration.

Proceedings at the General Meeting of Governors and Members,

HELD IN THE LARGE TENT IN THE SHOWYARD AT NOTTINGHAM,

THURSDAY, JULY 12, 1928.

LORD HARLECH (PRESIDENT) IN THE CHAIR.

President's Opening Remarks.

My Lords, Ladies and Gentlemen,—This is the third occasion upon which the Royal Show has been held at Nottingham, and I think I must begin by expressing the earnest hope that the Show of 1928 will eclipse in every way the two previous shows held here. Both the shows of 1888 and 1915 were held in Wollaton Park, kindly placed at the disposal of the Society by the late Lord Middleton, and it was originally anticipated that the Show this year would also be held in the Park.

When it became known that Lord Middleton was disposing of the property the Society was urged to arrange for a Royal Show as early as possible at Nottingham. There were two reasons for this—one was that the Show in 1915 was held during one of the years of the Great War, and could not be regarded as a typical Royal Show, and we were asked to pay a return visit to Nottingham when more normal conditions prevailed. The other reason was that it was thought that if such return visit was delayed Wollaton Park would be sold and would not be available for the Show.

As most of you know, the Society arranges its shows some years in advance, and in carrying out our promises to visit various towns we were unable to accept an invitation to visit Nottingham with a Show before this present year. This meant that the Wollaton Park site would not be available, as the Corporation of Nottingham had purchased the land and the hall, and were developing it for various purposes. When it became known that the Wollaton Hall site would not be available, there was just a possibility that the Show could not pay its promised return visit, but owing to the public spirit of one of your citizens of Nottingham, who placed the site on which the Show is being held here to-day at the disposal of the Corporation and the Local Committee, we were, in face of what at one time were considered insuperable difficulties, able to arrange for the Show to be held on this site, which practically adjoins the land where the two previous shows have been held.

I find that in the year 1888 the Nottingham meeting was regarded in every way as an outstanding success, although the weather was not at all favourable. The total number of live stock exceeded the number

exhibited at any Royal Show up to that time with two exceptions, and on the Thursday of the meeting the unprecedented number of 88,832 persons paid for admission, a result which had never previously been approached in the annals of the Society. The total number of persons passing through the turnstiles for the Nottingham Show that year was 147,927, which up to that time had only been thrice exceeded.

I do not want to weary you with the figures showing the entries of various kinds of stock at that meeting, so I will just pass on to the next Royal Show at Nottingham in 1915, when the Duke of Portland was our President.

As I have said before, this Show was held in most abnormal times, and most of you will remember that it was at one time considered doubtful whether the Show should be held at all. However, in view of the national slogan, "Business as Usual," the Council of the Society decided to go on with their arrangements and hold the Show, which in spite of the adverse circumstances was very successful and justified the decision of the Society. The classification then included ten breeds of horses, eighteen breeds of cattle, twenty-five breeds of sheep, and six breeds of pigs. The total amount offered in prize money was £9,000, and the entries of live stock, poultry and produce totalled 4,044.

This year the classification includes nine breeds of horses, twenty-one breeds of cattle, twenty breeds of sheep, and nine breeds of pigs. The amount offered in prize money is £14,633, and the total entries received number 4,754. At the 1915 Show 103,883 were admitted through the turnstiles, a reduction of 44,000 on the figures of the 1888 Show, which was not bad considering the days we were living in then.

I should like to express the hope that the figures of 1888 may be exceeded by the deficiency on the 1915 Show; and if this occurs I think then the Society will be able to say the Show has been financially successful.

It is not an easy matter to arrange for the holding of a country meeting such as the Royal Show in these difficult times. There are many factors constantly militating against the success of a show. The weather, constant outbreaks of foot-and mouth disease, trade depression—all have their effect, and the Society are powerless when these are against them. It therefore requires some courage to proceed with a show in face of these difficulties, and the thanks of the Society are due to the members, exhibitors and others who so loyally stand by them from year to year.

The measure of the success of a show, particularly the Royal Show, cannot be estimated by the number of entries, the number of persons admitted to the Show, or the amount of money taken at the "gate." As an educational institution the entire Show, its surroundings, its exhibits and the interest displayed must be the true barometer of its success.

If therefore the cordiality and enthusiasm of the Corporation of Nottingham and the Local Committee can be taken as an indication, then the success of the Show is assured, for I am told that the energy and ability and very ready help afforded by this Committee has seldom been equalled. (Applause.) Every little detail requiring local attention has been dealt with immediately and successfully. The County Agricultural Society agreed this year to withhold their show and assist by all means in their power the visit of the Royal Show, and we are indebted to them for this kindly action.

The Society is under a deep debt of gratitude to Their Majesties the King and Queen for visiting the Show yesterday. (Applause.) Their Majesties had a very tiring day on Tuesday at the opening of the University, and it was indeed good of them to pay us a visit, remain so long, and take such an interest in the Show.

While on this subject I should like to read a letter which I received this morning from the King's Equerry.

(The President then read the letter printed on page xxxix.)

We have also to express our dutiful and sincere thanks to H.R.H. the Prince of Wales, who will be visiting the Show to-day. He is expected on the ground at one o'clock.

The Royal Family have always taken a keen and practical interest in agriculture, particularly in the Royal Show, and most of you will have seen the exhibits sent from the Royal farms and from the farm recently taken by H.R.H. the Prince of Wales at Lenton.

Before I proceed with the formal business I do not think I ought to close without expressing on behalf of myself, and of all members and exhibitors, our most grateful thanks to our Honorary Director, Lord Daresbury—(applause)—for the perfect arrangements he makes in every department of the Show for the comfort of everyone; and the smooth working of the Show is, I think, a far greater compliment to him than any words of mine can be.

In addition I should like to include the name of our worthy Secretary, Mr. Turner. No work is too great an effort for him, and he puts his back into it with the very best will in the world.

Thanks to Lord Mayor and Corporation.

Lt.-Col. E. W. STANYFORTH said that it had fallen to his lot to propose a vote of thanks to the Lord Mayor and Corporation of Nottingham for their cordial reception of the Society. It would be realised that it was from the Mayor or Lord Mayor of the place visited that the Society first received their invitation; then there were negotiations for some little time, and the amount of work to be done was very great. The Lord Mayor and members of the Local Committee had to attend meetings every month in London, and members could imagine the number of details that had to be discussed and settled. It seemed hardly necessary for him to say that the Lord Mayor and Corporation of Nottingham had done all in their power to ensure the success of the Show, but he would like to say that the whole of the work had not fallen on the Lord Mayor, to whom he would refer again later. He would like to include in the vote of thanks the name of the previous Mayor, who was largely responsible for the invitation being sent to the Society—that was Alderman Freckingham—because he really had had a great deal of spade-work to do, and they should not forget that work.

In submitting the resolution he would like to take the opportunity of thanking the Lord Mayor for his hospitality to Members of the Council at the dinner on the previous evening. He also desired to congratulate most heartily the City of Nottingham on the honour conferred by His Majesty the King that week, and also to congratulate Alderman Huntsman on being Nottingham's first Lord Mayor. He trusted that the Society's visit might have had a little to do with this honour.

The resolution he wished to propose was, "That the best thanks of the Society are due and are hereby tendered to the Lord Mayor and Corporation of Nottingham for their cordial reception of the Society." And he would like to include in it the name of Alderman Freckingham.

The Rev. C. H. BROCKLEBANK, in seconding the motion, desired to associate himself with everything that had been said by Col. Stanyforth.

The resolution of thanks was passed unanimously.

Thanks to Local Committee.

Lord DARESBUY proposed "That the best thanks of the Society are due, and are hereby tendered, to the Nottingham Local Committee for their exertions to promote the success of the Show." In doing so he paid a handsome tribute to the good work of the Local Committee, on whose efforts, he said, the success of the Show so much depended. They had provided the Society with a beautiful site and they had had to get together a large sum of money. The preparations had entailed a lot of

detailed work, but he could safely say that never had it been done better than at Nottingham on the present occasion. The showyard this year was a little different in plan, but every one, he thought, would agree that the arrangement was satisfactory. Exhibitors and visitors found it easy to get about, and that was one of the principal things required in a show-yard.

LORD DESBOROUGH said he had much pleasure in seconding the resolution so eloquently proposed by their Honorary Director. He knew, and anyone who had been President of the Society knew, that in connection with a Royal Show there were three years of very hard work. The Nottingham Local Committee had done their part in a most satisfactory manner.

Might he be permitted to say a word on behalf of the World's Dairy Congress, and to express their grateful thanks to the Royal Agricultural Society for all they had done to make the visit to Nottingham successful. Forty-seven countries were represented at the Congress by official delegates. They were not all present when the King and Queen visited the Show, but a certain number were introduced to His Majesty, who was very much pleased with what he saw in the Congress exhibit at the Show. An extraordinary number of papers had been read at the Congress by delegates from all over the world, and, with the Council's permission, he would be happy to present to the Society a bound volume of those papers.

The resolution of thanks to the Local Committee was heartily accorded by the meeting.

ALDERMAN FRECKINGHAM, responding to the two resolutions which had been passed, said he did not expect when he came to that meeting to be called upon to speak, but in the absence of the Lord Mayor he welcomed the opportunity of saying a few words. He was very pleased to hear the kind words that had been uttered that morning with regard to the work they in Nottingham had done in connection with the Show, and he would convey them to the Lord Mayor and to the Local Committee. He thanked Col. Stanyforth for his kind reference to himself, who had been the unfortunate—or he might say, the fortunate—one who had suggested that the Show should come to Nottingham. It had been said, and truly, that from the very first meeting at the Guildhall, over which he had presided, they had had a most enthusiastic committee, who were most anxious that Nottingham should do the best it could for the Royal Show when it came. He had then said that three things were necessary for the success of the Show. The first was a Royal visit, and they had been honoured by the presence of their Majesties the King and Queen, and the Prince of Wales was expected that day. The second was good weather, and so far it had been all that could be desired. The third was a good attendance, and he thought they could hope for that before the Show finally closed. Those three things meant a satisfactory week and a successful Show. He was not going to weary them with an account of the work the Local Committee had done—those present at the meeting knew all about that—but he would like to say that what had been done had been done with the greatest pleasure. In conclusion, he expressed the hope that the time was not far distant when the Royal Show would again come to Nottingham.

Thanks to Railways.

LORD MILDMAY OF FLEETE moved a resolution of thanks to the railway companies for the facilities afforded by them in connection with the Show. Being, as he was, a director of the Great Western Railway Company, he recognised that the London and North Eastern and the London Midland and Scottish Railway Companies were more concerned than his company with the arrangements this year, and he desired to place on record his admiration, and also that of the meeting, of their efforts in connection with the Show. He knew something of the internal working of the railways,

and he was well aware of the large amount of work that was necessary to deal satisfactorily with the Show traffic and its prompt and punctual conveyance from great distances, not to speak of the excursion traffic. It was no easy matter, and he was sure that the members of the Society would approve of the resolution tendering to the railway companies the Society's cordial thanks. The Royal Agricultural Society was most grateful to them for their efforts, which had contributed so greatly to the success of the Show.

Mr. H. DENT BROCKLEHURST had pleasure in seconding the motion proposed by Lord Mildmay. No one, he thought, was in a better position or more able to move such a resolution. They were, he said, indeed grateful to the companies, on whose efforts the success of the Show so much depended. The railways had been successful in getting the numerous exhibits and the public to the Show. Might he express the hope that they would be equally successful in getting them home again?

Mr. C. W. H. GLOSSOP (Bramwith, Doncaster) said he wished to move an amendment to the effect that the resolution which had been proposed and seconded should refer only to the staffs of the railway companies engaged on the showground and at the showground station. He maintained that the companies did a great deal to make more difficult the exhibition of live stock. (Hear, hear.) A large number of members who were also exhibitors would, he thought, support the amendment. He had been an exhibitor at most of the important shows in the country during the past six years. He had had difficulty in regard to the Royal Norfolk Show. He had asked the railway company to give him a guarantee that his stock would reach the showground by a certain time; but in spite of the fact that he had had thirty minutes to spare at a certain junction, the animals with which he was travelling missed the connecting train.

As all exhibitors knew, they had, when sending stock to a show, to sign an indemnity with regard to men travelling in charge of them. Was it fair that any exhibitor should be asked to sign such a form, and then have to ask his men to travel in a vehicle they could not get out of?

He moved that the resolution be amended to refer only to the actual officials on duty at the show and at the showground station, who he was well aware worked extremely hard.

Mr. R. S. WALTERS (Birmingham), seconding the amendment, said that while he might not agree with all that had fallen from the previous speaker, he did think that on an occasion like that it might be well for those who were railway directors to make a note of the fact that the agricultural world was not so satisfied with the railways as they were before the amalgamation of the companies.

He would also suggest that the transit arrangements as regards motors left much to be desired. The Council would, he believed, receive many complaints as to the time waited in queues outside the main entrance, and he would like to suggest to the Council that their motor transit facilities at future shows should be carefully considered.

On being put to the meeting, only six votes were given for the amendment, and it was declared to be lost, the resolution of thanks to the railways being carried by a majority.

Thanks to the President.

Sir JAMES WATT (Carlisle) moved a hearty vote of thanks to Lord Harlech for his services in the chair that day. He also took the opportunity of congratulating their Honorary Director, Lord Daresbury, on this year's most excellent Show, which, in his opinion, was the finest that that great institution, the Royal Agricultural Society, had ever had in the whole of its history. He had, he said, seen other agricultural exhibitions abroad, but there was none in the whole world equal to this year's Royal Show at Nottingham.

Referring to the large amount of unemployment at the present time, Sir JAMES said there were 100,000 acres of land in this country in need of draining, but the Government was paying away two or three millions a year educating men how not to work. He asked the Society to organise a deputation to the Government on the question.

The agriculture of the country was in a parlous condition, and unless something was done for it he did not know what would happen. He thought the condition of agriculture at the present time was worse than in 1878. Farmers had been urged by the political wizard to plough up their grass land, to grow food for the people and win the war. They were told that agriculture in the past had been neglected, but that this would not happen again. Farmers were encouraged to buy their land; but later on the Corn Production Act had been cancelled, and the farmers were left with all the burdens of double wages, double railway fares, and double everything.

Sir JAMES expressed his pleasure that the Society had a distinguished nobleman in Lord Harlech as President this year. His lordship ought to be proud that such an exhibition as they had that week at Nottingham had been held during his year of office.

Mr. R. S. WALTERS seconded the resolution of thanks, which on being put to the meeting was enthusiastically carried.

Lord HARLECH, in acknowledging the vote of thanks, said they always looked forward to an amusing speech from Sir James Watt, but he (Lord Harlech) thought that Sir James put rather more responsibility on the Royal Agricultural Society than their shoulders could bear. There was no labour bureau in connection with the Society, and political actions were expressly forbidden by their Royal Charter. Therefore he was afraid that they could not fall in with what Sir James wanted them to do.

It was a great pleasure to him to preside during the Show at Nottingham, which had been extraordinarily blessed by Providence. He hoped the result would be favourable to the finances of the Society and that they would be able to continue their good work for many years to come.

He had been asked to allude to one matter, and that was the new Quarantine Station. It did not seem to be generally known what the Quarantine Station was, and how advantageous it could be to those interested in the export of British live stock to the oversea Dominions. There was a bureau in the showground where those interested could get full particulars of the station. Anyone who wished to have further information should communicate with their Secretary.

WEDNESDAY, AUGUST 1, 1928.

LORD HARLECH (President) in the Chair.

The PRESIDENT said that before they commenced their proceedings to-day he was sure that it would be their wish that he should refer to the recent very sad calamity that has occurred in the family of their Honorary Director. Only a short three weeks ago young Gilbert Greenall had been officiating as a judge of their light horses. He was in the best of health, but he has been suddenly cut off in the prime of life, when he was beginning to make himself useful in the world, and especially, as far as this Society is concerned, in connection with their Show. He was sure that they would wish that they should write a letter of very deep sympathy with Lord and Lady Daresbury and the other members of the family in the affliction that has befallen them. Several letters had been received from members of the Council asking to be associated with a vote of sympathy.

The vote of condolence was passed, all present standing.

Eleven new Governors were elected and 147 new Members were admitted into the Society.

In presenting the FINANCE Committee's Report, Mr. ADEANE said he was unable to give any figures as to the result of the Nottingham Show, but he feared that the profit would be very small.

On the motion of Mr. ADEANE it was resolved :—

"That, in order to facilitate the winding up of the accounts for the Nottingham Show as early as possible, authority be given for the issue during the recess of orders on the Society's bankers for the payment of accounts connected with the Show."

Colonel E. V. V. WHEELER, in moving the adoption of the Report of the BOTANICAL AND ZOOLOGICAL Committee, said that he would like to call attention to the fact that it had been decided to carry on the Orchard Competition for another five years. A provisional scheme had been drawn up for those five years. As stated in the Report, it was proposed to hold the Competition next year in the East Riding of Yorkshire, Lincolnshire, Norfolk and the Isle of Ely.

In presenting the Report of the RESEARCH Committee, Mr. C. DAMPLER WHETHAM wished to be allowed to make a very short report upon the Conference on Rural Electrification, which the Council were kind enough to ask him to attend. Three meetings of the full Conference had been held. At the first one it became clear that every one felt that one of the greatest obstacles in the way of the increased use of electricity in the country areas was the present very high cost of overhead lines. The strong feeling was expressed that the regulations ought to be amended. He was glad to say that at the second Conference the Commissioners said that a new code was shortly to be issued. This code came out in April, and he thought that the result would be that the average cost of overhead lines would be reduced from something like £600 a mile, which it was previously, to something like £400. That was a great gain, because it would mean that the cost of laying on current would be less, and consequently it would be possible for it to be brought over wider areas of the country.

Two Sub-Committees were appointed, one of which considered the probable demand for current and the other the best form of charge to be made. The first Sub-Committee came to the conclusion that in country areas within easy reach of towns something like 60 units per annum per head of the population might be looked for as a probable demand. In districts further from urban areas, where the population was thinner, they thought that there would be a second zone, where something of the order of 30 or 40 units might be looked for. Finally, they reluctantly felt that in the more sparsely populated areas, the areas further away, it was unlikely that any remunerative demand would be reached within any reasonable number of years. The second Sub-Committee accepted those same zones and the probable demand in them, and expressed views as to the charges which ought to be made. They put forward charges which were rather less in the first zone, where the probable demand was more, and rather higher figures in the second zone; but they thought that the charge ought not to be made in the way which was most usual in the urban areas, but ought to be a fixed charge depending on the size of the house or the farm, and that then there should be a uniform charge per unit used. That two-part scheme, they thought, was more fit for rural areas.

When the Conference finally came together again—he thought that it was in June—they accepted the Report of the two Sub-Committees and recommended various things to the Commissioners, such as that they should urge the holders of orders to see that the electrification was carried out as quickly as possible, and they put forward various other points which they thought would help rural electrification. Finally, the Commissioners said they thought that it was worth while to keep the Conference in being and to call it together again at the end of a year.

LORD BLEDISLOW could not help thinking that, although the Council had already, in adopting another Report, conveyed its thanks to Mr. Dampier Whetham for his invaluable work in connection with the Conference, it would be lacking in courtesy if it were not to express to him explicitly, after his statement, its profound thanks for the great trouble he had taken in regard to the Conference on the Supply of Electricity in Rural Areas.

He would like to mention another point. He was one of the unfortunate people who had endeavoured to apply the use of electricity to every process on the farm in which it seemed possible to do so, having within his own parish one of the large super-power stations. He objected to the fact that farmers had to pay 10 per cent. interest upon the cost of transmission from the power station to their premises. They had to pay the whole cost of bringing the current to their premises, for at the end of ten years the cables and posts had been paid for. They, however, did not belong to them, but still belonged to the Company that supplied the current. In addition, they had to pay a unit charge. It was quite clear that for ordinary agricultural purposes such charges were unthinkable.

The Research Committee, which might possibly be regarded as a child of his own, had done such extraordinarily valuable work, and that work was becoming so well known now throughout the country, that he was wondering whether it might be possible for it to be represented at the Annual Meeting of the British Association, where similar subjects were dealt with by the Agricultural Section, which adumbrated new lines of research in connection with agriculture. It occurred to him that if the Research Committee could be kept in contact with the work of the Agricultural Section of the British Association it would be all to the good, not merely from the point of view of the Committee in keeping it alive to the march of science in relation to agriculture, but also because it would have the effect of indicating to the agricultural section, which sometimes was regarded as a little unpractical, what were the views of practical farmers as to the adaptability of science to agricultural requirements.

The PRESIDENT endorsed what had been said by Lord Bledisloe with regard to the indebtedness of the Council to Mr. Dampier Whetham for his report. As to Lord Bledisloe's suggestion, perhaps his Lordship would like to have it referred to the Research Committee so that it might see what could be done in the matter.

LORD BLEDISLOW agreed to this course.

WEDNESDAY, NOVEMBER 7, 1928.

LORD HARLECH (President) in the Chair.

Mr. R. H. Tennant, representing Westminster Bank, Ltd., 41 Lothbury, E.C.2, was elected as a Governor, and nineteen new members were admitted into the Society.

Mr. ADEANE, in moving the adoption of the Report of the FINANCE Committee, said that there were two matters to which he would like to refer. The first was the meeting between Lord Daresbury and himself and representatives of the Yorkshire Agricultural Society which took place about a month ago. He was glad to say that a very amicable settlement was arrived at. The Yorkshire Agricultural Society was giving up its Show for next year, which was the usual practice. It was felt, however, that the old rule which had hitherto been in force, stipulating that in order that a member of the local Society should enjoy full Royal Show privileges he should have paid his subscription to his own Society for the previous year and the year of the Show, would injure the Yorkshire Agricultural

Society very seriously in their efforts to obtain new members, and the Finance Committee sympathised very much with that point of view. They consequently recommended the Council to allow all the members of the Yorkshire Society full privileges provided that they had paid their subscriptions up to May 1st, 1929. Not as a part of the bargain in any way, but quite spontaneously, the Yorkshire Society, very generously he thought, offered the Royal 50 per cent. of their subscriptions from new members obtained between January 1st and May 1st, 1929.

The other matter was dealt with fully in the report, but he would like to say a word about it. As probably every one present had seen in the Press, one of the largest grants ever made to any institution had been offered to Cambridge University by the Rockefeller Trust. The Trustees had offered the University £700,000, but on the condition that Cambridge University raised £479,000. It had already succeeded in raising £250,000, and there remained £229,000 still to be secured. The whole amount came to £1,179,000. That was the amount of the Rockefeller grant and the sum Cambridge University was asked to raise. He was told that of that amount no less than £649,000 was to be used for agriculture and the allied sciences. He felt sure that if the Society, as the leading Society in England, spontaneously made a generous grant to the University it would be very much appreciated, and he hoped that the Council would agree to the proposal made by the Committee.

It was suggested that the sum proposed, £1,000, should be considered as a grant from the Society to research; but he was afraid that, to protect their finances, it must be paid out of income, and that in the next few years the Society would not be able to make quite so generous a grant to the Research Committee as it had hitherto made. He laid the matter before the Research Committee on the previous day. That Committee was extremely sympathetic, and agreed that it would help in every way it could.

In presenting the Report of the VETERINARY Committee, Sir MERRIX BURRELL said that while the Secretary was reading the paragraph of the report which dealt with the return of animals from a show when a case of foot-and-mouth disease was confirmed during the period of the Show, it struck him that it might be wise to amend the report by eliminating the two words "by train." Lord Daresbury knew more about the matter than he did, because his lordship had carried on the discussion with the Ministry officials. If the words were eliminated it might be open to the Ministry to insist that an animal should be sent by motor-van, in which case it would never touch a public conveyance or a public dock, the motor-van could be thoroughly disinfected, and there would be no risk of carrying the disease to other animals. He moved the adoption of the report, amended in the way he had suggested.

Lord STRACHIE moved the following resolution as an addition to the report:—

"That the request of the Ministry of Agriculture to the War Office that they should issue an Order to military camps that the wrappers of chilled Argentine beef should be burned or disinfected should be granted."

He moved the addition for the following reason. The Agricultural Committee of the county which he had the honour to represent on the Council had had it brought to their notice that the Ministry of Agriculture had requested the War Office to issue an Order to military camps—especially, of course, Territorial camps—that the wrappers of Argentine chilled beef should be destroyed by being burned, or should at least be disinfected; but it was reported to the County Council that the request of the Minister of Agriculture had simply been ignored by the War Office. It would certainly be of great assistance if the Society were to support the Ministry in asking the War Office to issue the Order, and not do as he understood they had done up to the present, namely, ignore the request of the Ministry.

Captain OLIVER-BELLASIS seconded the motion proposed by Lord Strachie.

Lord BLEDISLOE was quite prepared to support Lord Strachie's proposal, because obviously any Government Department on a question of agricultural importance ought to recognise the authority of the Ministry of Agriculture; but he really rose to say quite plainly that in connection with the wrappings of Argentine carcasses he had had an opportunity of investigating the whole matter, he hoped absolutely without prejudice, on the spot, and he could not for one moment believe that they were the means of transmission of foot-and-mouth disease from South America. He was bound to say, in all justice to the large packing-houses or *frigorificos*, that anything more efficient or more careful in the matter of cleansing the carcasses, and using nothing but absolutely new aseptic or disinfected stockinette for the purposes of wrapping, he had never seen in any part of the world. He thought that it was only fair to say that on behalf of the Argentine Government, which he was confident had a very good answer in connection with the wrappings of meat sent from the Argentine to this country.

Major BEHRENS said that it would be quite out of the power of most exhibitors to send their animals by road. Surely it was perfectly possible to disinfect the railway trucks and make it safe for the animals to travel in them. He hoped that Sir Merrik Burrell would not press the point.

Sir MERRIK BURRELL thought that the Society certainly ought to support the Ministry of Agriculture in its desire to have the wrappings burned. It was a very small thing to ask, and there was no reason why it should not be done. He would like to have Lord Daresbury's opinion about sending animals back by road, because it seemed to him that half a loaf was better than no bread. He, personally, like a good many other people, had had the expense and trouble and anxiety of keeping valuable stock up in London for a fortnight or longer after the Show. He was sure that any reasonable man would far rather go to the trouble and expense of getting a motor-van from somewhere and getting his animals home and isolating them there than have them in a hole-and-corner place where he had no control over them, and have his men hanging about in London for a week or a fortnight or more at considerable expense. Such a state of things was no good either for the man or for the animals.

Lord DARESBURY did not think that it mattered much whether the words "by train" were omitted or not. In the case of a big show like the Royal, where one could get the identical vehicles that the animals had come in, he did not see that there was much danger in putting them into the trucks again. They would have been disinfected, and they would be disinfected again. In the case of small shows there might be some difficulty. In such cases the animals did not always go back in the same trucks. He did not see any objection to leaving out the words "by train." As Sir Merrik Burrell had said, half a loaf was better than no bread.

Colonel STANTFORTH thought that it would be better not to have the words "by train."

The motion moved by Lord Strachie was carried.

The Veterinary Committee's report, amended by the omission of the words "by train," was then adopted.

The Report of the STOCK PRIZES Committee having been presented, Captain OLIVER-BELLASIS said he had been asked to bring to the notice of the Council the very long time that herdsmen and cattle were kept on the parade. It would be very much appreciated if the time was somewhat shortened. He knew that the subject was a very difficult one.

Mr. BURKE was sure that the Steward of Cattle would bear the point in mind. He thought that everybody would realise that it was not a very easy thing to arrange in the case of an enormous cattle parade such as that at the Royal Show. The Steward of Cattle had made a very good

job of it for many years. At places like Nottingham, where the cattle were situated a very long way from the ring, it was absolutely essential to get the various breeds out rather a long time beforehand, especially when it was taken into account that some animals walked very much slower than others. At Harrogate, of course, the cattle would be very much nearer the ring, and perhaps it would be possible to arrange for a shorter time.

Mr. HARRIS (Steward of Cattle) said he had nothing to do with the time of the parade; that was scheduled in the programme; but as regards bringing the cattle out, he must say that everything possible was done to shorten the time. On the first day, when there were a lot of new men, it always took longer, but he thought that each day afterwards the time was reduced. The men knew their places better. This year there was one rather serious disadvantage. There was a lake in the middle of the showyard, and some of the cattle had to be brought round one side and some the other. As had been said, some beasts walked much slower than others. It was very hard to regulate the time.

Colonel STANYFORTH moved the adoption of the IMPLEMENT Committee's Report. As to the suggestion from Lincolnshire in regard to trials of sugar-beet horse hoes, he said that, according to the experts in the industry, the horse hoe was becoming rather an antiquated article and was being superseded by a much more modern mechanical contrivance. The Society was very interested and was anxious to do all it could in regard to sugar-beet. A letter had been received from the Ministry of Agriculture suggesting that the Society should possibly conduct some trials in reference to what was the most important part, because it was the most expensive part, of sugar-beet growing, namely, the lifting of the crop. He was informed that at least 70 per cent. of the cost of the sugar-beet crop was in the harvesting of the crop itself. Therefore, any means which could be devised to lessen the expenditure on the harvesting of the crop would be a move in the right direction. The Ministry of Agriculture recognised that, and they were anxious that the Society should, if possible, conduct some trials. All that he was asking to-day was that the Council should agree to the Committee which was suggested meeting the Ministry of Agriculture representatives and talking the matter over. He was sure that the Council would feel that if it was considered necessary and advisable to hold trials of sugar-beet lifters, those trials should be held. It would be in the minds of members that it was only a few years ago that the Society conducted trials at Newark; but the position had changed in a very short time, and no doubt it might be desirable to hold one or two trials. One member of Council had said that he did not think that there had been any very great improvement in the sugar-beet lifter. All that he suggested was that the Committee should meet the Ministry of Agriculture and discuss the matter, and he felt sure that if a trial was considered necessary the Council would sanction the holding of it.

Sir DOUGLAS NEWTON was very glad to think that the Council were going to pay attention to the most important question of sugar-beet lifting. It was impossible to grow sugar-beet on strong land—at least that was the opinion of a great many farmers now—owing to the difficulty of lifting the crop. If some mechanical forking arrangement could be obtained it would be of great value to the sugar-beet grower.

He would like to draw the attention of the Implement Committee to one or two other implements which they might consider the possibility of improving. The Society was now making a great feature of encouraging fruit-growers. Fruit-growers had to undertake an extensive system of spraying. That involved the laying of pipes up and down the orchards. The spraying machines, which were very efficient, filled the pipes; but they would not empty them. The result was a great loss of spraying fluid, which cost over twopence a gallon, and when there were thousands

of gallons wasted the item was a serious one. There ought to be some simple mechanical device by which the pipes could not only be filled, but could be emptied by the engine which filled them.

Another point was the need for spuds for tractors. On many farms it was not possible to use tractors when the land was sticky, because the earth filled up the spuds. It ought to be quite easy to make a spud which would be self-cleaning. If the Implement Committee would look into those matters it might be an encouragement to the implement-makers.

Colonel STANYFORTH said that the Committee would be only too glad to go into the matter.

In moving the adoption of the Report of the Committee of SELECTION AND GENERAL PURPOSES, the Earl of NORTHBROOK said he was sure that every member of the Council would feel the very deepest regret at the communication which the Secretary had received from their old friend and colleague, Mr. Ernest Mathews.

He thought that he might safely say that there was no member of the Council who had continuously undertaken so much work, and who had carried out better and more valuable and useful work for the Society on its Committees and on the Council than Mr. Mathews had done. He had given his time most freely to the interests of the Society, and he had been most active in promoting in every possible way its welfare. He was sure that they were very grateful for the great amount of work which Mr. Mathews had done for them. He had served on a large number of Committees. He had been a member of the Finance Committee, the Journal and Education Committee, the Veterinary Committee, the Stock Prizes Committee, the Selection and General Purposes Committee, and the Research Committee. He had been Chairman of the Dairy and Produce Committee since 1906.

Personally, he could only speak of Mr. Mathews as a member of the Veterinary Committee. He was always a most helpful member and one who took a very deep interest in all the work of the Committee. He also took a very deep interest in the affairs of the Royal Veterinary College.

Of course, it was more especially in connection with the Dairy and Produce Committee, of which Mr. Mathews was Chairman, that the Society would miss him most. He had a lifelong experience of dairy work, and he had a most extensive and thorough knowledge of all branches of the dairy industry. The Society would always remember with gratitude the strenuous work he did at the annual shows in the preparation of the Dairy Exhibition and in what he did in carrying out the milk, cheese and butter tests, and so on. As an expert in dairy matters, his loss would be a very great one to the Society. He was sure that they were all glad that they could still hope to have the pleasure of seeing him, occasionally at any rate, at the meetings of the Council.

Mr. GATES, as a humble member of the Council, representing the county from which Mr. Mathews came, wished to say how much he regretted that Mr. Mathews had found it necessary to retire from public work in connection with the Royal Agricultural Society, and also with regard to the County Agricultural Committee. They deeply appreciated all the work he had done on behalf of the county in London and in the country, and they hoped that he would live happily in retirement for many years, and that they might have the pleasure of seeing him both at Aylesbury and in London.

Mr. ASHTON, on behalf of the Assistant Stewards of the Show, wished to say how much they would miss Mr. Mathews. He had been with Mr. Mathews since the Lincoln Show, twenty years ago. The retirement of Mr. Mathews would be a great loss to him personally. He had always carried out the work in such a wonderful fashion. His charming personality and his great knowledge had overcome every difficulty.

The PRESIDENT said he would like to add his word of deep regret at

Mr. Mathews feeling obliged to give up his more onerous duties on the Council. He would like to endorse every word that Lord Northbrook and the other speakers had said as to how much Mr. Mathew's presence would be missed.

In presenting the RESEARCH Committee's Report, Sir MERRIK BURRELL said there were two or three pieces of research work which were drawing to a close. Now that some of the experiments were coming to a conclusion, one could see the value of some of the work that the Society had been doing. It always took years to see the results of research work. He was sure that the Council would be gratified to hear that Lord Hastings was able to assure the Committee yesterday that the rather large sums of money which had been spent during the last five or six years on experiments in barley growing—experiments had been carried out in various ways at the Norfolk station—had resulted in Norfolk farmers being of the opinion that where the lessons that had been taught at the station had been followed there had been an increase of about a quarter of barley per acre. That was a very definite result, and it looked as if the money had certainly not been thrown away.

Taking the experiments on the inoculation of lucerne seed which had been carried out by the Rothamsted station, it had been proved that the whole of the North and West of England were as capable of growing that extremely valuable crop as the South-Eastern counties, which were at one time thought to be the only part of England where lucerne could be grown with any success.

The experiments in the improvement of grassland had not been on a very large scale; but they undoubtedly had stimulated a great deal of interest amongst the local farmers. A great many of them came and looked at the plots. It had shown them that without a very great expenditure they could improve the value of their land in that part of England to a very great extent, quite as much by careful and correct grazing as by the application of any manures.

Experiments had been carried out in the direction of showing farmers how beet tops could be profitably used in feeding bullocks, and not only beet tops, but beet pulp. It had been shown that that was as good for feeding cattle during the winter as other roots.

It would be remembered that last year the Council gave leave to the Society to subsidise the Pathological Research Institute at Camden Town for the purpose of investigations into mastitis. He was glad to say that during the past year the work done by Dr. Minett and his assistants had gone ahead extremely satisfactorily. There had been nothing to go upon. The whole of the original data for research had had to be built up. That had now been done. He had great hopes that some definite result of great benefit to dairy farmers might accrue in the next two or three years from those investigations.

The Society would have to meet a largish expenditure during the next year or two for the collation of all the data that had been collected at Woburn for many years, and which had never been put into proper order. The information was lying dormant. Sir John Russell was extremely anxious that the work should be done and that he should be able to have the co-operation of Dr. Voelcker. It would take two or three years, and special and extra statistical assistance would be required. But the Research Committee thought that the expense would be fully justified in order that all the work done by the Society for thirty or more years should not be wasted.

He would like to ask any individual members of the Council who were on County Councils to give him their support in collecting data for what he thought would be a very valuable work.

It would be remembered that not long ago Mr. Robert Hobbs rather electrified the Council by saying that in his opinion the life of the dairy

cow to-day was not longer than two and a half years. If a statement like that had come from anybody of less experience, he did not know that he would have believed it. He could not help thinking that Mr. Hobbs was feeling pessimistic that day. As a matter of fact, in West Sussex during the last few months careful data had been collected of all the milk-recorded herds in West Sussex for the purpose of finding out what the depreciation of the herds was, and what were the causes. They had come to the astounding result that the life of a dairy cow was only about two years and three months; and the farmers were saying that whereas in days gone by they used to write off about 1d. per gallon for depreciation of their cows, they now found it necessary to write off something like 2½d. He was quite sure that by means of the collection of sufficiently reliable data it would be possible to find out what the causes of that increasing depreciation were. Also it was hoped to find out some means of preventing at any rate some of it. The West Sussex Agricultural Committee were going to circularise the whole of the County Councils of England and Wales, asking them to let their county organisers collect data in conjunction with their Milk-recording Societies, and to send the results of the investigation to the Committee. The Committee would then try to make arrangements to get the information collated and worked out and to see what could be done.

Sir DOUGLAS NEWTON asked what it was eventually hoped to discover. What was going to be the use of the information?

Sir MERRIK BURRELL said that he did not want to enter into too great detail at the moment, but he was quite prepared to answer the question. What had been found was that the incidence of the curve of depreciation of a herd went up with the curve of increased milk production. He did not want to suggest that it was yet known exactly why that should be so; probably it had something to do with faulty nutrition. Faulty nutrition led to a reduction in resistance to disease amongst the cows. Then whatever disease was most virulent in the particular neighbourhood had a greater chance of taking hold of them. In his part of the country it had been found that Johne's Disease was the greatest enemy; but he did not think that that would be found to be the case all over England. The investigations would show what percentage of cows went out and what the causes were, whether it was tuberculosis or sterility, or whatever it might be, and also what food the cows were being fed on, and the treatment of the land on which they were grazing.

Lord BLEDISLOE said that he was very pleased to hear such an excellent report from Sir Merrik Burrell. But when Sir Merrik stated that Lord Hastings and his friends of the Norfolk Station had discovered that they could grow a quarter more barley a year per acre on the average, he hoped that any report to that effect would make it perfectly clear that it was an economical proposition to do it. Quite frankly, his great fear with regard to a good deal of research that was going on at the present time was that they might produce certain results which might be advantageous, but the cost of producing which was such that it did not pay the working farmer to adopt the methods indicated. He hoped that the commercial side would always be taken into account in conducting agricultural research.

As regards the point raised by Sir Merrik Burrell in relation to the curve of a cow's lactation, it showed how very necessary it was that some representative of the Council should occasionally attend meetings of the British Association. In the agricultural section there had been a good many papers read on the subject or referring to it, and suggesting, from a commercial standpoint, very much the same conclusions as Sir Merrik Burrell seemed to have arrived at.

Sir MERRIK BURRELL presented a Report with reference to the QUARANTINE STATION. He was glad to be able to say that, after working

the station with animals in it from last April, the buildings had been found to be adequate and satisfactory in every way. The staff had proved efficient and most reliable. On the many visits he had paid he had always found the whole place scrupulously clean and the animals in good health. He very much regretted that one heifer had died. He saw her with the Ministry's veterinary surgeon, and at the time the veterinary surgeon had not the least doubt that she would recover. He (Sir Merrik) did not quite know what was the cause of her death. There had been a *post-mortem* examination, but he had not yet seen the report.

The finances of the Quarantine Station, as far as one could judge at present, were working out quite fairly to both sides, both to the Empire Marketing Board and to the exporters of stock. While the station was empty or only being partially used a considerable expense fell on the Empire Marketing Board, but while it was being used fairly freely the running expenses were more or less paid for by the fees which were charged to people sending their cattle to the station. It was necessary at the beginning to make rather a guess as to what would be a fair fee to charge, but it looked as though what was being charged was quite fair to everybody.

Mr. ALFRED MANSELL said that, as one who had been somewhat sceptical as to the use of the Quarantine Station, he would like to congratulate Sir Merrik Burrell on the very hard work he had done and on the success he had made of the station. He was very glad to know that Ireland, where he had many friends who had been wanting to import stock for several years, had been able to do so through the station. It was quite true that Australia, Canada and the United States had not come into line, but he was hoping that if the success of the station as a safe means of exporting stock could be proved, in the very near future the station would always be full. He congratulated the Society on having taken the matter up, because if there was one class of man in this country who needed encouragement, it was the breeder of pedigree stock. The station would help towards the success of stock in this country and would lead to good results abroad.

Mr. MATTHEWS, referring to the appointment of a veterinary surgeon in emergency cases, said that he was interested particularly in the case of the animal that died. The expenses were very heavy in the case of a moderate-priced animal. He had a bill for between £9 and £10 for special veterinary charges on a 45-guinea animal. He would like to ask the Chairman of the Committee if he would use his influence to keep down any veterinary expenses that might be incurred, as the matter was a very serious one to the exporter. The expenses mounted up and added considerably to the expenses of the exportation. If the matter could be looked into he would be glad.

Sir MERRIK BURRELL said that he would, of course, look into it. It was the first time that an animal had been ill in the station and the first time that it had been necessary to call in the special veterinary surgeon. The Ministry would not undertake that the veterinary surgeon who attended the Quarantine Station every day should be responsible for animals who went sick. It looked upon it as a responsibility of the owner to see that his animal was attended to. The station could not allow any veterinary surgeon in. A veterinary surgeon had been selected who was approved by the Ministry to do the special work. Perhaps the Secretary would explain the matter of the charge which had been made.

The SECRETARY said that Mr. Matthews had written a letter to him and sent a cheque, and that in the course of the day he would be replying to Mr. Matthews by letter. The charges were due to the special precautions which the veterinary surgeon had to take. The Ministry of Agriculture insisted that before he proceeded from his home to the station he should change his outside clothes entirely. That meant delay, and it also meant that he had to keep a special suit of clothes. He also had to keep a special

suit of rubber clothes. When he had finished his work at the Quarantine Station he was not allowed to carry on his usual practice until he had changed out of the clothes he had used in the station. The consequence was that he lost considerable time from his ordinary practice through attending at the station. As a matter of fact, the fees had been arranged between the Ministry of Agriculture and the Quarantine Stations Committee tentatively until the Quarantine Stations Committee had had a formal meeting.

The Report of the Council to be presented to the Annual Meeting of the Governors and Members on December 12th was prepared and ordered to be issued.

WEDNESDAY, DECEMBER 12, 1928.

LORD HARLECH (President), in the Chair.

The PRESIDENT said he was sure that all the members would agree with him when he said that they were very pleased to see with them Lord Lascelles, the President-Elect for the coming year. (Applause.) They welcomed him on his first attendance at their gathering.

Forty-two new members were admitted into the Society and one member was re-elected.

Mr. ADEANE moved the adoption of the Report of the FINANCE Committee, with the exception of a paragraph dealing with the show accounts.

The report, with the exception mentioned, was adopted.

Mr. ADEANE then moved the adoption of the paragraph dealing with the show accounts. In doing so, he said that the total receipts at Nottingham were £51,096, against £36,997 at Newport, showing an increase of £14,099. Towards that increase implement fees and admissions to the showyard were the principal contributors, the fees for implements showing an increase of £3,180, and admissions to the showyard £8,212. The total expenditure at Nottingham was £50,374, compared with £47,824 at Newport, an increase of £2,550. This was mainly due to the additional expenditure on shedding owing to increased entries of implements and stock. The net result of the show was a credit balance of £722, compared with a debit balance of £10,827 at Newport. He did not think that a show was ever held under better auspices than was the show at Nottingham. It was honoured by visits from their Majesties the King and Queen and the Prince of Wales. The weather was perfect, and there was a most cordial reception from the city of Nottingham. Indeed, it was generally agreed that the show was one of the best ever held. No doubt the gate was the determining factor financially, and he feared that it was very much affected by the continued depression in the mining districts. It therefore did not quite come up to expectations. It must, he thought, be realized that in the future there would be a great many counter-attractions to the show. If that was so it was very important that everything possible should be done to maintain the membership of the Society. It would be seen from the report of the Council that in the last three years the Society had lost no less than 2,000 members. Last year the net loss, after making allowance for new members, was 1,130. He was glad to say that this year the net loss was only 383. It was necessary that that hole should be stopped. He again urged members of the Council to do everything they could to keep up the membership of the Society.

In connection with the show the Society was under a heavy debt to a great many people—first to their President, Lord Harlech—(applause)—whose term of office he was sure they all regretted was coming to an end; to their Honorary Director, Lord Daresbury, who had always done his best for the Society—(applause); to the Lord Mayor and Corporation of

Nottingham, to the Local Committee, and also, last but not least, to the Stewards of the show, who undertook very onerous duties most willingly. (Applause.)

LORD CORNWALLIS, in moving the adoption of the JOURNAL AND EDUCATION Committee's report, reminded the Council that Mr. Ernest Mathews was elected a representative of the Society on the National Agricultural Education Board as long ago as 1908; he was Chairman in 1921 and 1922, and from 1923 to 1925. They all deeply regretted that ill-health prevented him any longer carrying out those duties which he had discharged with such conspicuous ability. (Applause.)

The Report of the VETERINARY Committee having been presented, LORD MILDMAY OF FLETE said that he was very glad of the opportunity which Sir Merrik Burrell gave him of saying a few words, because as a member of the Medical Research Council and the *Field* Distemper Fund Council he was very keen that the Society should recognise what remarkable and admirable work had been accomplished, and successfully accomplished, by Dr. Laidlaw and Major Dunkin, who for a great number of years past had devoted all their energies to tackling the problem presented by dog distemper. He had been looking at some of the past minutes of the Council, and he saw that four years ago he expressed the hope that the work which he had been witnessing on the farm of the Medical Research Council might bear fruit. Very natural impatience had been expressed by the subscribers to the *Field* Fund, who for four years had complained that they were getting nothing for their money. If members read the report which had appeared in the *Field* and other newspapers they would see how laborious had been the process of research. In the first place, it was necessary to build flyproof kennels and to take every precaution against the entrance of any distemper infection. Then the Kennel maids had to be trained. Before they came into the kennels they had to disrobe, take a bath and put on sterilised clothes. Still more lengthy was the process of breeding successive generations of dogs, until there was a generation of dogs which could never have come in contact with the distemper infection. Two years ago the members of the Medical Research Council knew that considerable progress was being made, and that the research workers were getting ahead with their investigations. It was a point of honour amongst research workers that they should exercise a severe restraint upon themselves. They never boasted. They never whispered anything to the Press until they had made a definite step forward. Having made a definite step forward, they placed the results of their labours unreservedly at the disposal of the public and of their fellow research workers. The thing that always impressed him was the modesty of research workers, not only in agricultural directions, but in medical directions. They hated self-advertisement, and they recoiled from prominence in the public eye. In these days of modern Press methods and "stunt" reputations they gave an example which ought to be followed.

To him the most satisfactory thing in connection with the Report was that it was endorsed without reservation by the Medical Research Council. What was the Medical Research Council? It was a body which was entrusted by the Government with the duty of distributing an annual grant of £160,000, provided by the nation for the purpose of stimulating and encouraging medical research. Of the Council three were laymen. They were Lord Balfour (the Chairman), a Labour member, Sir Charles Trevelyan, and he (the speaker) acted as treasurer. The strength of the Medical Research Council lay in the nine scientific members, who were men of world-wide reputation in all fields of medicine. They were known all over the world. At its last meeting the Medical Research Council unanimously and enthusiastically endorsed the claim of Dr. Laidlaw and Major Dunkin that they had discovered an absolutely sure preventive of distemper. When such men as Sir Charles Sherrington, a Past-President

of the Royal Society and an O.M., and Sir Charles Martin, the Principal of the Lister Institute, said, as they had said in conversation with him, that those men had "done the trick"—those were their own words—that was good enough for him.

It might be asked: "How is this benefit going to reach the dog-owning public?" All reports as to the processes of manufacture were made public in the scientific journals; but it must be remembered that only exceptionally well-equipped laboratories could produce a really effective vaccine, and the public should be warned of the risk of using any but vaccine from such sources. He thought that there was no harm in saying—the fact had not been published before—that, conscious of that risk, the Medical Research Council had invited Messrs. Burroughes Wellcome and Co., a firm of very great repute, to undertake the work of producing a vaccine with the technical advice and assistance from time to time of the Medical Research Council. That Council would keep in touch with them.

He would like to give another warning. The vaccine must be given by a really competent veterinary surgeon, for without cleanliness and without effectively sterilised instruments and without competent scientific methods there was a great risk of failure.

More money was wanted, and why? It was hoped to simplify the process of inoculation. At present the puppy when he was three months old or later—the best time was when he was three months old—was inoculated with the dead virus, and a short time afterwards he received a moderate inoculation of living virus. Though, as he said, it was a moderate dose, at the same time it was a hundredfold greater than would be sufficient to give an attack of distemper to a dog that was not immune. His children walked a couple of foxhound puppies. Those puppies were treated the other day, and they did not mind it a bit. The puppies showed no symptoms of anything, and they were entirely immune. It was desirable to simplify the process and if possible to get the two operations into one. That was very desirable.

There was another point. There were two ways of cultivating the virus. One was *in vivo*, in the living dog, which was comparatively simple, and the other was *in vitro*, in the tube, outside the animal altogether. The latter was by far the easier and the cheaper process, but so far scientists had not been able to cultivate the virus *in vitro*. When they were it would be possible to make it far more extensively. It must not be imagined that the vaccine now in use, because it was not being produced *in vitro*, was any less potent or effective. He believed he was right in saying as to the vaccine of small-pox that scientists had never been able to cultivate it *in vitro*, yet none but a crank would say that it was not effective and did not confer great benefits on mankind.

Did the complete and striking success as regards distemper point to prospective success in the direction of foot-and-mouth disease? He did not pretend to scientific knowledge. He had for ten years been a member of the Medical Research Council, and in the unfortunate absence of Lord Balfour, whose health was bad at times, he had presided over the Council. How the members stood that he did not know, for he had to show that on scientific subjects his ignorance was unfathomable. Every now and again he had to call a halt and say: "Will you be so kind as to explain that in language which will be understood by an ignoramus?" The members were very kind to him when he spoke in that way, but very soon in their enthusiasm they rose to scientific heights, which left him behind. He was an onlooker on the Council, and he had been an onlooker for ten years. But an onlooker saw a very great deal of the game, and it was as an onlooker at the methods of the Medical Research Council that he said that all was not well with agricultural research.

The subject was a very big one, and he would not go into it at the present time, but perhaps the Council would allow him to say a few words

about it on a future occasion. He thought that members would agree with him that their warmest thanks and congratulations were due to Dr. Laidlaw and Major Dunkin and also to the Chairman of the Scientific Committee, Sir Charles Martin, for the valuable work they had so successfully achieved. They ought to include also in their thanks the *Field* newspaper, which had collected a really immense sum of money, and had spared no pains to make the Fund a success. Finally he thought thanks were due to the Medical Research Council, whose staff in the laboratories and on the farm had been available for the researches. He thanked the Council very much for listening to him.

Lord BLEDISLOE wished most warmly to endorse the well-deserved tribute which Lord Mildmay of Flete had asked the Council to accord to the medical research workers who had been engaged on the subject. He thought that they ought really to include in the tribute Lord Mildmay himself. (Applause.) He was sure that Lord Mildmay was over-modest in that connection, as in others. But for the enthusiasm which he had for the last four years and upwards thrown into the work he was quite certain that it would not have been attended with the amount of public support, or indeed, as he believed, with the amount of success, which Lord Mildmay was now in a position to announce.

He would like to take the opportunity of emphasising again the enormous importance of allowing earnest and capable research workers to do their work without undue publicity, because in the past it had so often occurred that premature announcements had been made which had proved to be utterly false, and which had discredited agricultural research of different kinds in the eyes of the agricultural community. He could not help feeling that the announcement that day might prove to be an historical announcement. He believed that he was right in saying that it had been found quite impossible up till recently to separate, and subsequently to cultivate for the purposes of inoculation what had been known as ultra-microscopic and non-filtrable germs. To that category, of course, belonged very specially the germs of foot-and-mouth disease, which had proved to be such a pest in this country. He could not help feeling, that, carrying the matter a step further, as Lord Mildmay had said, now that there had been established a means of preventing distemper in dogs by inoculation by a prepared serum, a serum prepared from the germs of the disease, we were on the high road to the preparation of a similar serum which might enable us to combat the ravages of foot-and-mouth disease. He warmly supported the tribute which Lord Mildmay had paid.

The PRESIDENT agreed with what Lord Bledisloe had said. He was sure that they were very grateful to Lord Mildmay for all the trouble he had taken in the matter. His lordship had expressed his congratulations to the scientists on the body with which he was connected, but he (the President) thought that they ought to add their congratulations to Lord Mildmay himself as Chairman of that body. He only hoped that the successful discoveries with regard to distemper would be the forerunner of an equal success in regard to foot-and-mouth disease.

In presenting the Report of the IMPLEMENT Committee, Colonel STANFORTH said that with regard to the suggested sugar beet lifter trials there had been a little difficulty. He told the Council at the last meeting that he wished to take a small Committee to consult with the Ministry of Agriculture in regard to the matter, as the Ministry had requested. A very long discussion took place. Different opinions were expressed as to the necessity at the present time of having trials of the implements. Eventually he was going to recommend his Committee, and ultimately the Council, to sanction trials; but since then several letters had been received, and also certain information, which had rather altered the opinion of the Committee. They had, therefore, drafted the clause in the Report to the effect that at the present moment they did not think that it was opportune

to have the trials. There had been practically no real alteration in the machinery necessary for the lifting and topping of beet during the last two or three years and they did not think that there was likely to be much alteration. The implement representatives on the Committee said that they did not think that any English firms would contemplate going into the matter as the expense would be very great and that they very much doubted whether the English farmer would move in the matter, because the general impression, he was sorry to say, was that with the withdrawal of the subsidy in a short time the growing of sugar beet would very seriously decrease in England. At any rate it was not quite known at the moment what was really wanted. What was wanted abroad was not what was wanted in this country because the climatic conditions were so different. An implement which would work on land which was fairly dry was not the implement which was being looked for in England, because our climate was not such that we could ever rely on having dry soil to work on. An implement which would work under all conditions was what was wanted by farmers in this country, and one did not at the moment really know what form that implement should take. The Committee proposed now to ask the Ministry to go into the matter thoroughly. The Ministry had only asked the Society to carry out the trials. It was proposed now that the Ministry should undertake further investigations before trials took place.

Sir DOUGLAS NEWTON asked to be permitted to express some measure of regret that they seemed to have reached a full stop in regard to machinery for the lifting of sugar beet. He thought that in this country we had to get a machine which, as far as the heavy land was concerned, would do the job of lifting the beet. Otherwise the thing would have to pass out of the hands of the farmers in heavy land districts. The importance of machinery was not fully realised by the Council. Perhaps he was an enthusiast in the matter. Work on the land and the payment of good wages were entirely wrapped up in machinery. Forty or fifty per cent. of the annual bill of the farmer consisted of wages paid for labour and 15 per cent. of the capital of the farmer was in machinery. Therefore it was very important to pay attention to the matter. The Society took almost £13,000 from the Implement makers last year and spent £3,800. It took over £8,000 from the Cattle exhibitors and spent £7,700. It practically returned to the cattle exhibitors everything it took from them, but in the case of the implement people it pocketed nearly £10,000. It was a very good thing that the Society should pocket a large sum of profit; nevertheless, it would be well if there could be some sort of understanding by which the Society set aside a small percentage, say 5 per cent., of the large sum of money it took from the implement people and spent it in trying to get them to produce new machines which were wanted and which were vital to the development of certain branches of agriculture. Could not the Society do something in regard to the question of sugar beet and not simply face the fact that no new implements were being made at the present time? Could not it see whether it could not stimulate the industry to produce machines which were wanted and which would be of real service to, at any rate, heavy land farmers?

Mr. GREAVES said that if anyone had the machine and liked to bring it out, there were the silver medals of the Society, which were probably as good an advertisement as any trial, because under the new regulations all machines had to be thoroughly tested. If a man had a good beet lifter he would get the silver medal.

Mr. R. BORLASE MATTHEWS wished to support what had been said by Sir Douglas Newton. He thought that the Society could only do work in the way it had done in the past by lending encouragement to people to bring out new designs. Some time ago he was trying to persuade an English manufacturer to produce an electric plough. The reply was that the firm was perfectly capable of producing such a plough, but that it had to wait

until a demand arose. He rather held the view that one needed to anticipate demand by encouraging people.

The PRESIDENT moved the adoption of the Report of the SELECTION AND GENERAL PURPOSES Committee, and wished to say how deeply they regretted that Mr. Overman had ceased to be a member of the Council. He was a very old member of the Council, and had done most useful work upon it. It was only owing to ill-health that he had been obliged to resign.

With regard to the Research Committee, it had been hinted that if Lord Mildmay of Flete was added to it he would be a very useful member of that Committee if he would consent to act.

He would like to welcome the following four new members to the Council : Lord Folkestone, Mr. Forshaw, Colonel Abel Smith and Mr. Borlase Matthews. The Council gave those gentlemen a very hearty welcome.

If any new member of the Council would like to be on any particular Committee, if he would forward his name to the Secretary the matter would be considered at the next meeting of the Selection Committee.

The Report of the RESEARCH Committee having been presented, Sir DOUGLAS NEWTON asked whether any information could be given upon a certain point. Sensational statements had appeared, notably in the Sunday Press, regarding the alleged discovery of a new fibrous plant which could be cultivated in this country with great advantage, so it was said, by agriculturists, and which would produce bountiful supplies of fibre, which were urgently required, he understood, by cotton manufacturers and other industries in this country. The story he had read was to the effect that an eminent ornithologist was wandering in remote and distant parts of New Guinea in search of birds, and found one in an almost inaccessible place which built a nest of some strange fibre. He traced the fibre to a particular plant. He brought the seed back, and the statement was that that fibre was going to bring prosperity to the whole of the agricultural industry in a few years' time. He gathered that there were numerous fibres which were used commercially in this country. In addition to those which were used, there were a great number of fibres which could be used, but not economically. What he wished to ask was whether there was information available as to the facts of the case. Was there such a plant, was it capable of being grown commercially, and was it of any use to agriculturists? If the statements which were made could to any considerable degree be justified, the members of the Council, he thought, would be well advised to bring the matter to the attention of their agricultural constituents.

Lord BLEDISLOE said that the Council had heard the somewhat significant statement by no less an authority than Lord Mildmay of Flete that all was not well with agricultural research. He ventured to suggest that under those circumstances the Research Committee might usefully invite Lord Mildmay of Flete to expound to them his apprehensions, because if all was not well with agricultural research it was obviously for the premier agricultural society of England to put the matter right if they could. He suggested, although, perhaps, it was a little beyond his province to do so, that Lord Mildmay of Flete would be a useful member of the Research Committee.

There was one other matter that he would like to touch upon. It had already been mentioned that Sir John Russell was likely to proceed to South Africa next summer to the British Association meeting there as the representative of the Royal. Possibly members knew that there was one field of research in which it had to be admitted that at any rate one of our Overseas Dominions was pre-eminent, and that better work had been recently, at any rate, done there than we could lay claim to in this country. That was veterinary research. Consequent upon that, veterinary research was going to form a very important feature, perhaps the leading feature, of the agricultural section of the British Association meet-

ing in South Africa. A difficulty arose in connection with getting proper representation of British veterinary science at Cape Town and Pretoria, and particularly at the latter place, because there was to be a special session to consider that field of research. He was rather wondering whether, assuming that the British Association were prepared to make a grant, as he believed they were, towards the expenses of one of our more eminent veterinarians, a similar grant might possibly be made by the Royal to enable one of our best veterinary representatives to appear as an exponent of British veterinary work on that important occasion.

Sir Douglas Newton had referred to a mysterious plant which was supposed to be growing in the South-West of England, and which was calculated to yield excellent fibre, which he (Lord Bledisloe) had reason to believe was comparable with that produced from jute and also from sisal. He was not supposed to know very much about it at present, but he had examined the plant and he had examined the fibre. If all that was said about it was correct, it looked as if it might prove to be not only productive of British fibre made from a British fibrous plant, but a source of some measure of prosperity to those, at least, in the West of England, who were successful in obtaining seed. He understood that at the present time it was extremely difficult to obtain either seed or plants for the purpose of those who desired to grow it, but he felt certain that a great deal more would be heard about it in the future.

The PRESIDENT said that as regards what had fallen from Sir Douglas Newton he was sure that the Research Committee would inquire into it and take note of what he had said.

The following Standing Committees were appointed for 1929:—Finance, Journal and Education, Chemical, Botanical and Zoological, Veterinary, Stock Prizes, Judges Selection, Implement, Showyard Works, General Show, Selection and General Purposes, Dairy and Produce, Horticultural, and Research.

On the recommendation of the Committee of Selection, the present members of the various Standing Committees were (with some exceptions) reappointed to those Committees. Sir John Russell and Mr. T. Neame were added to the Journal and Education Committee; Mr. B. J. Gates to the Chemical Committee; Captain H. A. Christy to the Botanical and Zoological Committee; Mr. A. T. Lloyd to the Botanical and Zoological, Stock Prizes and Judges Selection Committees; Lord Folkestone to the Veterinary and Research Committees; Lord Mildmay of Flete to the Research Committee; Mr. R. Borlase Matthews to the Implement and Research Committees; Mr. T. Forshaw and Mr. H. P. Mortimer to the Stock Prizes and Judges Selection Committees; Mr. William Burkitt to the Stock Prizes, Judges Selection and Showyard Works Committees; Mr. John Bell to the Showyard Works Committee; and Mr. W. E. Hale to the Dairy and Produce Committee.

Proceedings at the Annual General Meeting of Governors and Members,

HELD AT THE ROYAL AGRICULTURAL HALL, ISLINGTON,

WEDNESDAY, DECEMBER 12, 1928.

LORD HARLECH (PRESIDENT), IN THE CHAIR.

President's Opening Remarks.

The PRESIDENT: My Lords and Gentlemen, it is just twelve months ago that you did me the honour of electing me President of the Society for the year. At the time I said that I felt some diffidence in undertaking the post, as I had no local standing. Geographically I was not on the spot, as I thought I ought to be, to undertake the work for the show, which took place at Nottingham. However, I had a very nice letter from the Lord Lieutenant of the County, and he begged me to accept the Presidency. When I received that letter, therefore, I could not refuse it, and I may say I have never regretted having accepted the honour. (Applause.) We have had a most successful year, and it has been a most interesting and pleasurable one to me, and I look back with some feeling of pride on the work that the Society has accomplished.

Before I say more I have a duty to perform, and that is to thank the Royal Agricultural Hall Company and the Smithfield Club for the use of this room for our meeting. This we do each year, but I would ask Mr. Alex Parker, the managing director, whom we all know so well, and who takes such a keen interest in our welfare, to believe that it is not a mere matter of form, but a sincere expression of gratitude for the convenience afforded us as a place of meeting, and for the arrangements he makes for our comfort. (Applause.)

To come next to the annual report of the Society this has been circulated to members, and I hope you have all read it very carefully, for it contains many interesting matters that I cannot venture to comment on or even allude to to-day.

Let us take first, however, the question of the membership of the Society, which is really its mainspring. On page 5 you have a table showing the decrease in the various counties during the last few years, that is since the show was held at Chester in 1925. This is probably indicative of the depression in farming during the past few years, but it would be nothing less than a tragedy if the work of the Society had to be curtailed owing to lack of support. I would, therefore, like to supplement the appeal in the report, and ask you to do your utmost to obtain new members. It ought to be easy for each one of you on return to your home to think of one or two people who would like to join, and I am sure the very fact that you have attended here to-day is evidence of a more than passing interest in the work of the Society. What an encouragement and pleasure it will be for my successor in the presidential chair if at the first meeting, in February next, he is able to say that the first business of the Council is to elect "a record number of new members." Please do not go away and forget this, but help us in the most practical way.

Now let me say a word about the show. I do not remember a more successful or comprehensive show than we had at Nottingham in all sections—live stock, implements, dairy, flower show, forestry, etc., were all excellent, and the exhibit of dairy machinery in the World's Dairy Congress Building was such as we shall probably never see again at any

outdoor show in this country. Then we had visits from their Majesties the King and Queen, and also H.R.H. the Prince of Wales, and I am only sorry that the exhibits of the King and the Prince did not succeed in gaining the highest awards in their respective classes for live stock; but, as you know, they are such excellent sportsmen and such "good losers" that they did not seem to mind this very much so long as the all-round excellence of the stock was maintained. (Applause.) This, I can assure you, was the case, and in many breeds it was surpassed at Nottingham.

The financial result, as you have seen from the accounts in your hands, was a profit of £722—not a very large profit, considering the amount of money involved in what I may call staging the show, and not a very adequate recompense for the labour devoted to the show and its organisation by Lord Daresbury, our Honorary Director, and also our zealous Secretary, to both of whom we owe a huge debt of gratitude. (Applause.) I did look for a better gate, especially as we had so many visitors from our Dominions overseas, but I suppose the bad times and other local attractions must bear the blame of this. As you may remember, there were a great many attractions going on in the town, and also in the County of Nottingham, during the show time. We were also very much indebted to the Clerk of the Weather.

I must not be sparing in thanks on behalf of the Council to the Local Committee at Nottingham, who worked so hard for the success of the show there. Their information and advice on all local problems were of great value to us, and the Town Clerk, his deputy, the Borough Engineer and all local officials put their whole heart into the task of assisting in the organisation of the show. Their keen desire to help and the hospitality afforded by the Lord Mayor of Nottingham and his colleagues will not soon be forgotten.

An innovation at the Nottingham Show was the provision of coffee bars or canteens in the stockyard, where the herdsmen, grooms, etc., could obtain refreshment immediately on arrival and just before departure. (Applause.) Concerts were also organised by the Y.M.C.A. for the entertainment of the men on the showground in the evening. So successful were these, as evidenced by the appreciation shown by the exhibitors' servants, that the Society is justified in continuing them next year.

At Harrogate, perhaps, in 1929 we may have something better to record, as the large industrial towns of Yorkshire in the vicinity, such as Leeds, Bradford and Halifax, have the population which can provide the gate if only they can be induced to come to see "a Royal Show." The site of the show on the "Stray" is famous throughout England, although it is much less in extent than most Royal showyards of the past few years.

The Royal has not visited Yorkshire since the Doncaster Show of 1912, a show well remembered by many present, as stock had to be refused admission to the showyard, and was actually turned back at the station owing to outbreaks of foot-and-mouth disease. The visit previous to that was to York in 1900, so that, as only one visit has been paid to the county of broad acres in twenty-eight years, our visit to Harrogate next year is overdue, and I hope the county will rally to our support. The Yorkshire Agricultural Society and the Harrogate Agricultural Society are both withholding their shows for the year—(applause)—and are working in friendly co-operation and sympathy with us in our efforts. A full schedule has been prepared; £10,000 has been voted by the Council as prize money. Breed societies augment this also with sums for their respective breeds, and the Local Committee will provide a sum for the ring classes and attractions which next year may be more extensive than usual, so that altogether the aggregate sum may approach £15,000.

I must not detain you much longer, but I would ask you to read carefully pages 13 to 25 of the report, which give you some idea of the work of the Society other than the show, and the many advantages to be obtained by becoming a member of our Society.

A most interesting volume entitled "*Agricultural Research*," has been published for the last three years; the last volume has recently been posted to members. It was a comprehensive review of many phases of agricultural work during the year past, written by experts in each particular subject. Those members who have not received a copy should apply at once to the Secretary, and I would ask you also to bring this book to the notice of everyone connected with agriculture whom you know. It is published at a shilling, and I think I can safely say is worth many times that amount.

One more word about the Quarantine Station administered by the Society. This is at the East India Dock. It was opened in April last by Mr. Amery, the Secretary for the Colonies and Dominions. Although Canada, Australia and New Zealand have not yet accepted the scheme, about 350 animals have passed through this station prior to export to other Dominions and Colonies. It has now become established and has proved its worth, thanks very largely to Sir Merrik Burrell, who was the instigator and organiser of this scheme, and whose ideas are expressed in the building itself. (Applause.) The fact that it is administered by the Society is considered by our Overseas friends to be a guarantee of its efficiency and efficacy.

May I say personally how very much I have appreciated the help of the Chairmen of Committees and members of Council during my year of office, and particularly would I thank Lord Daresbury for his great personal assistance and co-operation. (Applause.)

My Lords and Gentlemen, I thank you for what has been to me a most happy year as your President. (Loud applause.)

Adoption of Report.

The next item is the presentation of the balance-sheet. That is in your hands. I do not know whether anyone would like to ask any questions about it. If not, I will go on to the report of the Council. That has been circulated to each member of the Society. I do not know whether you would take it as read. (Agreed.)

I will ask Mr. Tom Thomson to move its adoption.

MR. TOM THOMSON: My Lord President, my Lords and Gentlemen, it gives me very great pleasure indeed to have the opportunity, as being an ordinary member of the Royal Agricultural Society, to propose the adoption of this report. It contains evidence of very active work on the part of the Council, to whom we are deeply indebted at all times for their laborious offices on behalf of the Society. I am sure that we regret as ordinary members, as much as they do, that sudden diminution of members during the past year, and I for one, as I am sure many others will be, will be only too glad to co-operate with the Council in trying to restore the list of members to its previous numbers and more.

But, like most reports, as the Irishman said, it contains some omissions. May I refer to one very serious one, as I think it is, with regard to sheep scab. I, like many others, am extremely tired of having to carry the burden of sheep scab continuously year after year, and I wonder very much why it is that the Royal Society has suddenly allowed this very important difficulty to disappear from their reports. We have been favoured hitherto with some details and some figures as to the relation of scab to the flocks of sheep in the country. Whether it is because they despair of finding any solution for the difficulty, or whether it is because they are waiting, by putting it by for a rest, to see if it will recover energy in some form or other, I do not know, but I appeal to the Council (and

I am certain I shall be supported by most of the members of the Society) to take some drastic step to eliminate this dreadful trouble in the flocks of sheep in this country, continuous in its operation apparently, and inflicting loss and inconvenience all round, as I think it is time that we got rid of it.

I have nothing more to say, except to thank the Council, if I may, for their kindly offices on our behalf. I beg to propose the adoption of this report.

Mr. T. E. MILN : My Lord President, my Lords and Gentlemen, it is my privilege to second the proposal of Mr. Thomson, that the Report as circulated be adopted, and I do so with very much pleasure. We must all do our best to increase the membership of the Society. If we cannot induce our friends to invest the sum of one guinea per year in a membership ticket, I hope we shall all do our best to induce our friends to invest the sum of one shilling per year in the "Agricultural Research" volumes which are now being published. (Applause.) I think that those volumes are the very cheapest agricultural literature which we can obtain. (Applause.) They are most comprehensive in character, and every one of them is written by an undoubted expert of the present day. I think we should be doing a real service to agriculture in general if we induced our friends to read these booklets on a larger scale. (Applause.)

THE PRESIDENT : Is there any other gentleman who would like to say anything on this Report ? If not, I will put it to the meeting.

The motion was then put to the meeting, and carried unanimously.

Election of President.

Lt.-Col. E. W. STANYFORTH, C.B., then rose to move that Viscount Lascelles, K.G., be elected President, to hold office until the next annual general meeting. (Applause.)

He said : As I have known Lord Lascelles all his life and his father and grandfather before him, perhaps I am not altogether unfitted to propose his election as President to you. I do not think it has often been our lot in our annual election of President to find on the very spot practically where we are going to hold our annual show a nobleman of qualifications such as Lord Lascelles has. (Applause.) He is the heir to a very large property in Yorkshire. Part of that property is in Harrogate itself, including a famous field in which exist all the wells that have made Harrogate so great. He has been associated and interested in agriculture, owing to the position and the property that his father owns, all his life, and therefore he is a very natural President to us. He has served as a soldier with great distinction in the war. (Applause.) Another thing in which he has a very high position is Freemasonry. I am not a Freemason myself, but he does occupy a very high position in the Masonic world. (Applause.)

As a sportsman there are a great many things that can be said about him. (Hear, hear.) You know that he is not only a breeder but a trainer of racehorses. You also know that he is a member of the Jockey Club. Far more important, to my mind, as I am not any very great racing man myself, he is Master of one of the best packs, if not the very best pack, of foxhounds now in England. (Applause.) Last, but not least, he occupies the position of Lord Lieutenant of the West Riding of Yorkshire. That is no mean job. It involves an enormous amount of time, responsibility and work, and Lord Lascelles has put his whole heart and soul into that work, as he does in everything that he takes up.

It is not often that anybody has the privilege, in proposing the election of a President of this Society, to speak for one who has the qualifications for it that Lord Lascelles has. I should like to say, if I may be allowed to say so, and if he will allow me to say so, that if you elect him as your President, we think he has a very great asset also in Her

Royal Highness Princess Mary. (Applause.) When we mention her name at this present moment our thoughts and hearts go straight to Buckingham Palace, as, indeed, they have been for so many days and weeks now. We rejoice to think that the report to-day is somewhat better, but we must also realise that anxiety still remains. I know I am voicing the feelings of all of you here when I say that we wait, we trust and we pray that God will save our King. (Hear, hear.)

Why I ventured to mention Princess Mary's name is this: She is very much interested in everything that appertains to country life. She is very interested in the herd of cattle that Lord Lascelles breeds. I can tell you that the interest that she took in the Yorkshire Agricultural Society's Show when it visited Harrogate was enormous. She came every day, and she has told me herself that she is looking forward with the greatest enthusiasm to the visit of the Royal Agricultural Society to Harrogate. Therefore I do feel that, in electing Lord Lascelles as our President, we shall have a very great asset also in H.R.H. Princess Mary. I beg to move the resolution.

Mr. H. DENT BROCKLEHURST, in seconding the resolution, said: Unlike Colonel Stanyforth, I am not a Yorkshireman and I do not represent Yorkshire, but I have lived in Yorkshire, and, to make up for those other failings, I have done the best I could—I have got a Yorkshire wife. (Laughter and applause.) I have very great pleasure in seconding this resolution, because I have known Lord Lascelles since he was what they call in Yorkshire a nipper—that means, I believe, when he was in the cradle. I am perfectly certain that the interests of this Society will be in very safe hands with him, and that he will show the same energy that he has shown in all his duties, as Colonel Stanyforth has said, in such close co-operation with H.R.H. Princess Mary. Colonel Stanyforth has mentioned among his other qualifications one which I think is most dear to Yorkshire, and that is Lord Lascelles' love of horses. He not only breeds his own, but he races them. Unlike Colonel Stanyforth, I am rather fond of racing, and I am hoping that the association of Lord Lascelles with the parent Agricultural Society of England will result in greater luck next year on the Turf. (Laughter.) May I say, sir, that in regretting your departure, I have very great pleasure in helping to push a younger friend into your position? I beg to second the proposal.

The motion was then put to the meeting, and carried unanimously.

VISCOUNT LASCELLES, K.G.: My Lord President, my Lords and Gentlemen, I have to thank you very heartily for the high honour which you have done me in electing me President of the Royal Agricultural Society of England. I am afraid that my services to agriculture are not sufficient to warrant the confidence which Colonel Stanyforth and Mr. Dent Brocklehurst have so very kindly reposed in me. The only qualifications which I really have for the position are the two which they were good enough to point out: one, that I do live very close to the place where it is your intention to hold your show in the coming year; and, secondly, that Princess Mary is my wife. (Applause.) Princess Mary is very keen, as Mr. Brocklehurst has said, about agricultural things. She knows a great deal more about the breeding of the herd of Guernsey cattle which we keep than I do. Her assistance, I know, will be an asset to the Society as wife of the President.

I do hope (and I have very good reason to believe that my hope will be fulfilled after the speeches which I have already heard this afternoon) that that last column on pages 4 and 5 of this report will show a different look this time next year. (Applause.) I should like to think that, at the end of the year, our membership was no longer a dwindling one, but was on the increase. (Hear, hear.) I should feel proud if that could be the report at the end of my year of presidency, and I do hope, gentlemen, that you will assist me to make that so. In any case I can promise

you that I will do the best I can during the coming year, and I hope, as I say, that that last column on pages 4 and 5 will show a different appearance in a year's time, if Princess Mary and I can have anything to do with it. My Lords and Gentlemen, I thank you. (Applause.)

Election of Trustees.

The PRESIDENT: The next item on the agenda is the election of Trustees. It is customary for the Trustees to be elected by a show of hands. The names of the present Trustees who are, under Bye-law 141, recommended by the Council for re-election, are printed in List A on the agenda paper, and I will now ask you to signify in the usual manner whether it is your pleasure that these twelve noblemen and gentlemen should be elected Trustees of the Society to hold office until the next ensuing annual general meeting.

The Trustees, whose names are as follows, were duly elected:—

H.R.H. the Prince of Wales, K.G., York House, S.W.1.
H.R.H. the Duke of York, K.G., 145 Piccadilly, W.1.
Charles Adeane, C.B., Babraham Hall, Cambridge.
The Duke of Bedford, K.G., Woburn Abbey, Bedfordshire.
Lord Cornwallis, Linton Park, Maidstone, Kent.
The Earl of Coventry, Croome Court, Severn Stoke, Worcestershire.
Percy Crutchley, Sunninghall Lodge, Ascot, Berkshire.
Lord Daresbury, C.V.O., Walton Hall, Warrington.
The Duke of Devonshire, K.G., Chatsworth, Bakewell.
The Earl of Northbrook, Stratton, Micheldever, Hampshire.
The Hon. Cecil T. Parker, The Grove, Corham, Wiltshire.
Lieut.-Col. E. W. Stanyforth, C.B., Kirk Hammerton Hall, York.

Election of Vice-Presidents.

The PRESIDENT: The next business is the election of Vice-Presidents. I also ask you to signify by show of hands whether it is your pleasure that the present Vice-Presidents, whose names are printed in List B, should be elected to hold office until the next ensuing annual general meeting.

The Vice-Presidents were duly elected as below:—

C. Coltman-Rogers, Stanage Park, Bucknell, Salop.
The Earl of Derby, K.G., Knowsley, Prescott, Lancs.
Lord Desborough, K.G., Taplow Court, Taplow.
R. M. Greaves, Wern, Portmadoc, North Wales.
Lord Harlech, Brogyntyn, Oswestry, Salop.
William Harrison, Albion Ironworks, Leigh, Lancs.
Sir Arthur G. Hazlerigg, Bart., Noseley Hall, Leicestershire.
Ernest Mathews, C.V.O., LL.D., Elmodesham House, Amersham.
The Duke of Portland, K.G., Welbeck Abbey, Worksop.
The Earl of Powis, Powis Castle, Welshpool, Mont.
Viscount Tredegar, Tredegar Park, Newport, Mon.
The Earl of Yarborough, Brocklesby Park, Habrough, Lincolnshire.

Accountants and Auditors.

The PRESIDENT: The next item is the election of Messrs. Price, Waterhouse and Company as professional accountants and auditors.

Capt. BERTRAM ROLFE: I beg to move that Messrs. Price, Waterhouse and Company be elected as professional accountants and auditors of the Society's accounts for the ensuing year.

Mr. F. L. GOOCH: I have very great pleasure in seconding the proposition of Captain Rolfe. I should like, if we could from this meeting, to put to a practical issue the recommendations suggested by Mr. Thomson in moving the report, that we unite with the Council in trying to increase our membership. I think one practical suggestion is that every member here should undertake to propose or nominate one member during the ensuing year for membership. I do not mean a member who just gives us a guinea, although that is very nice, but a member who will take an active interest in this Society and will continue a member for more than one year. I

think, if every member of the Society was to nominate one, we should have the President-elect's wish carried out, and we should have an increasing membership rather than a diminishing one. I think if every member of the Society can do that every Councillor ought to nominate ten. (Applause.) I well remember the time when His Majesty was our President at Norwich that the then Acting-President, who was the Hon. Ailwyn Fellows, afterwards Lord Ailwyn, nominated nearly 200 members during his year of office. If we can get every member of the Council and every member of the Society to nominate at least one member, we shall have an increase rather than a decrease. I do not mind admitting here that every year that I have been a member of the Royal Agricultural Society since 1883 I have nominated one member a year. I have not missed a show for twenty-one years. If we put our shoulders to the wheel I think we can increase our membership by a large number. We only want to take that little yellow form which Mr. Turner is only too willing to supply to every one of us and explain to each of our friends who has an interest in agriculture the privileges which are contained on that yellow form, not only the privilege of attending the show, but the privileges which they can get from every branch of your work, for us to get a large increase in membership. There are so many branches of your work, such as the veterinary branch, the chemical branch, and others, that there is something in which everyone can take an interest, and I maintain that no agriculturist at the present time, unless he is a scientific agriculturist, can succeed. I have very great pleasure in seconding the adoption of the motion.

The motion was then put to the meeting and carried.

Elections to the Council.

The PRESIDENT then said: The next item is the election to the Council. Under the bye-laws, the requisite measures have been taken to fill the vacancies on the Council in the representation of the districts in Group B. As President, I have now formally to report to the Annual General Meeting the names and addresses of the ordinary members of the Council who have been elected by the several divisions, in order that the meeting may, in the words of the bye-law, "take cognisance of their election." This duty I formally fulfil by placing before you List C, on pages 3 and 4 of the printed Agenda paper, in which the names of the newly-elected members are specially marked.

Durham: William Burkitt, Grange Hill, Bishop Auckland.

Yorks. West Riding (two representatives): Lieut.-Col. the Right Hon. G. R. Lane-Fox, M.P., Bramham Park, Boston Spa; Leopold C. Pagot, Middlethorpe Hall, York.

Nottingham: Thomas Forshaw, The Stud, Carlton-on-Trent, Newark.

Leicester: W. Lindsay Everard, M.P., Ratcliffe Hall, Leicester.

Rutland: E. Guy Fenwick, North Luffenham Hall, Stamford.

Suffolk: Fred Smith, Deben Haugh, Woodbridge.

Buckingham: E. J. Gates, Pembley, Tring.

Essex: Sir Walter Gilbey, Bart., Elsenham.

London (three representatives): Frank P. Matthews, 27 Cavendish Square, W.1;

F. Hamlyn Price, 7 Harley Gardens, The Boltons, S.W.10; Lieut.-Col. Sir

Archibald G. Weigall, K.C.M.G., Petwood, Woodhall Spa.

Shropshire: Alfred Mansell, College Hill, Shrewsbury; E. Craig Tanner, Npton-on-Severn, Wroxeter.

Hereford: Sir John B. G. Cotterell, Bart., Garnons, Hereford.

South Wales: Capt. Hugh A. Christy, Llangoed, Llyswen, Breconshire.

Devon: Lord Mildmay of Flete, Flete, Ermington, S.O.

Wiltshire: Viscount Folkestone, Longford Estate Office, Alderbury, Salisbury.

Surrey: R. Borlase Matthews, Greater Felcourt, East Grinstead.

Members' Suggestions.

The PRESIDENT: Has any governor or member any remark to make or suggestions to offer that may be referred to the Council for their consideration?

Mr. L. C. TIPPER: My Lords and Gentlemen, I want to let you into a secret. A committee was appointed a little time back consisting of exhibitors of various kinds at the Royal Agricultural Society's Show in implements, seeds, medicines, cattle, pigs, sheep, etc. The object of that gathering was to consider the views of those exhibitors with regard to shows generally, not particularly with regard to the Royal Society, which, of course, is the parent Society, of which we are all so proud. But the object of that committee is to draw attention to the very serious position in which agriculturists are placed at times, during this very serious agricultural depression, in having to attend so many shows in different parts of the country. A suggestion was thrown out and a permanent committee has been formed in order to consider the best way in which the suggestions can be worked out and ultimately adopted. We thought that we could not do better than come to the parent Society, the greatest Society in England, to get their support. I am sorry to say that the Royal Society is one of the offenders in this respect. One of the prominent agriculturists of this country (I do not know whether he is in the room, but he was exhibiting at the Royal Show in Nottingham) said to me: "I am here in this unfortunate position. I have to keep my men here, I have to keep my cattle here over Sunday till Monday." That is a blot. We are aiming at this. We are aiming at getting the smaller societies to merge into the larger ones and the county shows to amalgamate as far as possible, and to alter the shows so that there shall be no Sunday intervening. That means that we do not wish to have a show which will terminate on Saturday night or that will open on Monday morning. That is one of the serious points. I know the answer is that we have to have Saturday because of the gate money. In many parts of the country where you have shows, you also have an early closing day, a sort of half-holiday. We do suggest that, even with the Royal Agricultural Society, the Saturday might be abolished, and the gate money might be secured by making it the cheap day on the early closing day in the particular district in which the Show is held. I do not think I must ask more at this moment than for the help of the Council, or that the Council will kindly consider the matter to see how far they could help us. (Applause.)

Mr. W. R. GANTLETT: The suggestion I have to make is that I cannot help thinking that it would be better if there were two judges in the sheep classes, at any rate, instead of one, at the Royal shows. Sheep are the particular animals in which I am interested. It would not put the Society to any extra expense. As I understand, there were two judges at the last show, one was judging females and the other judging males. I contend that it would be much better if those two men acted together and judged the classes together. It would be no waste of time, as it is impossible for them to judge the two sexes at once. I was exhibiting there and my shepherd could not be holding females at the same time as he was holding males. What happened was, the males were judged first and the females afterwards. I may say I am an exhibitor at this Smithfield Show of Oxford Down sheep and am a reserve champion. My friend Mr. Clifford, who is sitting beside me, is also an exhibitor of sheep here, and he is in full accord with me that it would be much better to have dual judging, the same as they have here, than to have single. If the Council will take this into consideration I think it would be a very great inducement to us as exhibitors, and we think we should be likely to get fairer play than we do with only one judge. There is one other thing I might point out. It is rather invidious, but I think it ought to be mentioned. At the Nottingham Show a brother of one of the judges was showing in the classes in which he was judging. To my mind, that is very unsatisfactory. If there had been two judges it would not have been so bad, but it was bad that he was the judge. It was rather

invidious, as the brother won the first two prizes. That may be only a coincidence, but, in all seriousness and earnestness, as an exhibitor at the Royal Show for a number of years, I do ask the Council to take into their very serious consideration whether they should not appoint two judges for Oxford Down sheep. It would not be any waste of time, because there are two judges now, and it would not involve any additional expense to the Council, but it would give me and my friend Mr. Clifford, who is another exhibitor, much more confidence that we should get fair play. If you will take some notice of what I have said, I should be very much obliged.

MR. J. J. CRIDLAN : I should like to endorse what has been said by the previous speaker, but in regard to cattle, which is a very important section. Two heads are always better than one. When we breed cattle and take care of them for three or four years it is very hard lines if they do not get fair judgment. I do not know a similar case to that case mentioned by the Oxford Down sheep breeder, but I hope you will consider the position, and in future let us have as good judging as we had in the past. The Smithfield Club a few years ago initiated single judges, but after four or five years it proved a fiasco. I am not betraying any confidence when I say that I was the gentleman who was successful in defeating His Majesty King Edward VII. in heifers at the Hereford Show, while he had beaten my steer at Birmingham. I do think, if you reconsider your judging arrangements, your awards would be much more popular than they are at present.

THE PRESIDENT : I can assure you, gentlemen, that your suggestions will meet with the serious attention of the Council.

Thanks to Retiring President.

LORD MILDMAY OF FLETE : My Lords and Gentlemen, there falls to me the very pleasing duty, pleasing because my proposition will meet with hearty approval from you all, of proposing that a hearty vote of thanks be given to Lord Harlech for his services during the past year. I always think one of the most pathetic things in life is to see a man having most capable powers, a man with a big brain, great industry, unflagging power of work, with all the mental gifts that can make a great statesman, fail, and fail miserably, because he lacks one attribute, and that is the power of inspiring friendly sympathy. You often see it. Well, that can never be said of Lord Harlech. His power of making friends wherever he goes is unbounded. (Applause.) When he is your friend, as I know, he is your very true and very firm friend. He has been a very firm and very true friend to agriculture during his year of office. He has always been a practical farmer. I use the word "practical" with meaning, because there are many theoretical farmers, and a great deal of nonsense they talk, especially in the House of Commons, where, unfortunately, I had to listen to them for thirty-seven years. He is a practical farmer, and so he knows the difficulties and dangers attendant on a farmer's career. He works on his farm himself. He is intimate with every detail, and that is why he has discharged, so efficiently, the important position he occupies. He has had a most successful year of office. Everything has worked like oil. The Royal Agricultural Society has many ramifications and many Committees and many directions in which it is active, and when all work together, as it has done during the past year, that is largely due to the efficient President. (Hear, hear.) He has himself alluded to one most important development during his reign, and that has been the establishment of the Quarantine Station. That is a most remarkable development, and no one who has not looked into the working of it and into the conception of it knows how much work it has entailed, how much trouble it has given to him and to Sir Merrik Burrell and other members of the Council to bring into being an institution which is of such

great advantage to the agriculturists of this country. You will agree with me that he has been very ably seconded by Lady Harlech, who has the same very acceptable personality, for whomsoever she meets she makes a friend of. What is more, she, too, is a practical farmer, for I am told that what she does not know about ducks is not worth knowing. At any rate, we can congratulate you, Lord Harlech, upon having compelled the very highest respect and regard not only in all the members of the Council, but in every member of the Royal Agricultural Society, and we hope and trust that you and Lady Harlech may be given health and strength thoroughly to enjoy your lives for very many years to come. (Applause.)

LORD DARESBURY: It gives me the very greatest pleasure to second the proposition so ably proposed by Lord Mildmay. I do not think I can add anything to what he has said. We have had many good Presidents at the Royal Agricultural Society, but we have never had a better President and a man who has upheld the dignity of office and worked harder than Lord Harlech. I am only sorry to say good-bye to him, though it is not good-bye from the Council, as he is still a Vice-President. I hope he will long serve on the Council and give us the benefit of his advice for many years to come. It is with the greatest pleasure in the world that I second the proposition.

LORD MILDMAI: I will put the proposition to the meeting. I ask all those members who approve of it to signify their approval in the usual way.

The motion was carried with acclamation.

THE PRESIDENT: My Lords and Gentlemen, I indeed feel it very difficult to reply adequately to the very kind words which have fallen from Lord Mildmay and Lord Daresbury. In fact, I feel sure that I am blushing and I hardly dare face you. But I assure you that it is with great regret that I am relinquishing my post as President. I have been so well backed up, as I have said before, by every member of the Council, that I shall always look back with the greatest pleasure to the twelve months I have had as your President. I beg to thank you most sincerely for your very hearty vote of thanks to me this day.

Royal Agricultural Society of England.

AWARDS OF PRIZES AT NOTTINGHAM, 1928.

ABBREVIATIONS.

- I., First Prize. II., Second Prize. III., Third Prize. IV., Fourth Prize.
V., Fifth Prize. R.N., Reserve Number. H. C., Highly Commended.
C., Commended.

The responsibility for the accuracy of the description or pedigree, and for the eligibility to compete of the animals entered in the following classes, rests solely with the Exhibitors.

Unless otherwise stated, each Prize Animal in the Classes for Horses, Cattle, Goats, Sheep, and Pigs, was "bred by Exhibitor."

HORSES.

Shires.

Class 1.—*Shire Stallions, born in 1925.*

No. in
Catalogue.

- 5 I. (#20, & Champion.)—SIR ARTHUR NICHOLSON, Highfield Hall, Leek, for Stretton Broadside 39985, brown, bred by Col. E. C. Atkins, Stretton House, Hinckley; s. Darley Wild Wave 38249, d. 113043 Stretton Brooklime by Snowdon Menestrel 30924.
4 II. (#10.)—F. W. GRIFFIN, Boro' Fen, Peterborough, for Brockhill Padra 39852, bay, bred by H. S. Thomas, Beansheaf Farm, Theale; s. Brockhill Friar 39113, d. 105494 Sawgate Rose of Secundus by Bablyng Nulli Secundus 28993.
6 III. (#5.)—F. WHITEHEAD, White Meadow Farm, Ashbourne, for Moulton Conqueror 39942, bay, bred by A. H. Clark and Son, Moulton Eaugate, Spalding; s. Horning Mimic 34048, d. 104851 Moulton Fantasy by King's Messenger 31602.
1 R. N.—H. and R. AINSOUGH, Burecough, Lanes, for Ansty Forest Ruler.

Class 2.—*Shire Stallions, born in 1926.*

- 12 I. (#20, & R. N. for Champion.)—F. W. GRIFFIN, Boro' Fen, Peterborough, for Boro' Renown 40037, bay; s. Ditchingham John 38164, d. 113990 Crawford Renown by Rowington Recruit 35145.
13 II. (#10.)—MRS. STANTON, Snelston Hall, Ashbourne, for Statfold Nulli Secundus 40170, bay, bred by Charles Gilman, Statfold, Tamworth; s. Sundridge Nulli Secundus 36952, d. 111793 Hagworthingham Fashion by March King 34955.
11 III. (#5.)—SIR BERNARD GREENWELL, BART., Marden Park, Woldingham, Surrey, for Marden Traitor 40113, bay; s. Cowage Dalesman 39140, d. 116921 Marden Forest Queen 2nd by Champion's Goalkeeper 30296.
14 R. N.—F. WHITEHEAD, White Meadow Farm, Ashbourne, for Pinchbeck Friar.
H. C.—8, 9.

Class 3.—*Shire Stallions, born in 1927.*

- 18 I. (#20.)—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for Pendley Harvester, black, bred by Mrs. Stanton, Snelston Hall, Ashbourne; s. Seedsman 29589, d. 99582 Pendley Lady by Champion's Goalkeeper 30296.
15 II. (#10.)—J. MORRIS BELCHER, Tibberton Manor, Wellington, Salop, for Tibberton Premier King, black; s. Eaton Premier King 39486, d. 115610 Tibberton Ruby by Field Marshal 5th 35627.

¹ Champion Gold Medal, and £5 to the Reserve, given by the Shire Horse Society for the best Stallion. A Prize of £2 is also given by the Shire Horse Society to the Breeder of the Champion Stallion, provided the Breeder is a Member of the Shire Horse Society, and the Dam of the animal is registered in the Shire Horse Stud Book.

Awards of Live Stock Prizes at Nottingham, 1928. lxxii

- 19 III. (25).—MRS. STANTON, Snelston Hall, Ashbourne, for Snelston Reaper, brown, bred by A. Colclough, Hassall House, Sandbeach; s. Seedsman 39589, d. 96624 Alsagen Princess Royal by Champion's Goalkeeper 30296.

Class 4.—Shire Mares, with foals at foot.

- I. (220. & R. N. for Champion.)—ALLAN HOLM, The Grange, Tilton, Leicestershire, for 119057 Tilton Abbess, bay, born in 1924 [foal by Basildon Clansman 36277]; s. Monks Green Friar 35891, d. 83247 Tilton Jenny by Tatton Dray King 23777.
 28 II. (210).—A. THOMAS LOYD, Lockinge House, Wantage, for 118657 Nameless, bay, born in 1921 [foal by Heilloom 3rd 39510], bred by Isaac Driver, Medbourne, Leicester; s. Southall Rival 31833, d. Gipsy by Folville Blue Blood 29399.
 21 III. (25).—A. H. CLARK & SON, Moulton Eaugate, Spalding, for 109180 Moulton Messenger's Princess, bay, born in 1920 [foal by Moulton Shakespeare 39560]; s. King's Messenger 31562, d. 82337 Moulton Victor's Duchess by Moulton Victor King 28590.
 24 IV. (24).—F. DONALD GROUNDS, Elwyn House, March, for 117071 Orfold Daisy, bay, born in 1923 [foal by Cippenham Friar 38110]; s. Babingley Nulli Secundus 26993, d. 89237 Dogdyke Jessie by Carlton What's Wanted 29208.
 27 R. N.—MATTHEW HUBBARD, Ivy Stud, Eaton, Grantham, for Kingfield Fluff.
 H. C.—30. C.—22.

Class 5.—Shire Colt Foals, the produce of Mares entered in Class 4.²

- 37 I. (210).—MRS. STANTON, Snelston Hall, Ashbourne, for bay, born April 16; s. Seedsman 39589, d. 114377 Hanbury Harboro' Starlight by Harboro' Nulli Secundus 33231.
 34 II. (25).—MATTHEW HUBBARD, Ivy Stud, Eaton, Grantham, for bay, born April 6; s. Pendley Goldmine 38949, d. Kingsfield Fluff by Harboro' Nulli Secundus 33231.
 35 III. (23).—A. THOMAS LOYD, Lockinge House, Wantage, for brown, born March 27; s. Heilloom 3rd 39510, d. 118657 Nameless by Southall Rival 31833.
 32 R. N.—A. H. CLARK & SON, Moulton Eaugate, Spalding, for bay
 H. C.—33.

Class 6.—Shire Filly Foals, the produce of Mares entered in Class 4.²

- 40 I. (210).—F. DONALD GROUNDS, Elwyn House, March, for bay, born March 5; s. Cippenham Friar 38110, d. 117071 Orfold Daisy by Babingley Nulli Secundus 26993.
 41 II. (25).—ALLAN HOLM, The Grange, Tilton, Leicestershire, for Tilton Princess, dark bay, born March 1; s. Basildon Clansman 36277, d. 119057 Tilton Abbess by Monks Green Friar 35891.

Class 7.—Shire Fillies, born in 1925.

- 44 I. (220. & Champion.)—A. THOMAS LOYD, Lockinge House, Wantage, for 119877 Lookinge Ridgeway Rose, bay, bred by W. G. and E. H. Roberts, Great Hope, Leighton, Welshpool; s. Lincoln What's Wanted 2nd 35312, d. 92830 Elegance by Moors Kitchener 25448.
 46 II. (210).—SIR ARTHUR NICHOLSON, Highfield Hall, Leek, Staffs, for 119855 Leek Coral, brown; s. Pendley Footprint 37728, d. 112124 Leek Pearl by Champion's Goalkeeper 30296.
 45 III. (25).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for 119815 Kerry Ace of Diamonds, bay, bred by Ben Alderson, Glanmihell, Kerry, Mont.; s. Basildon Clansman 36277, d. 108657 Kerry Blossom by Halstead Blue Blood 27397.

Class 8.—Shire Fillies, born in 1926.

- 50 I. (220).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for 121532 Windrush Tulp, brown, bred by W. R. Scantlebury, Great Barrington, Burtford, Oxon; s. Heilloom 3rd 39510, d. 101877 Broad Hinton Bonny by Bardon Hero 80134.
 48 II. (210).—THE DUKE OF DEVONSHIRE, K.G., Chatsworth, Bakewell, for 120991 Ledwyche Pearl, brown, bred by Edward Howells, Lower Ledwyche, Ludlow; s. Ledwyche Clansman 39242, d. 108383 Hay End Nulli by Harboro' Nulli Secundus 33231.
 49 III. (25).—A. THOMAS LOYD, Lockinge House, Wantage, for 121010 Lookinge Namassake, dark brown; s. Heilloom 3rd 39510, d. 118657 Nameless by Southall Rival 31833.
 47 R. N.—A. H. CLARK & SON, Moulton Eaugate, Spalding, for Moulton Chalice.

Class 9.—Shire Fillies, born in 1927.

- 55 I. (220).—MRS. A. T. LOYD, Lockinge House, Wantage, for Lookinge Faith, bay, bred by J. H. Appleby & Sons, Tixall, Staffs; s. Seedsman 39589, d. 101841 Bridgford Briar Queen by Normandy Briar King 32672.
 54 II. (210).—SIR BERNARD GREENWELL, BART., Marden Park, Woldingham, Surrey, for Marden Unity, bay; s. Cowage Dalesman 39149, d. 108957 Marden Monica by Champion's Goalkeeper 30296.
 56 III. (25).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for Pendley Sylvia, brown; s. Seedsman 39589, d. 118409 Kerry-Clanish Maid by Basildon Clansman 36277.

¹ Champion Gold Medal, and 25 to the Reserve, given by the Shire Horse Society, for the best Mare or Filly. A Prize of £2 is also given by the Shire Horse Society to the Breeder of the Champion Mare or Filly, provided the Breeder is a Member of the Shire Horse Society, and the Dam of the animal is registered in the Shire Horse Stud Book.

² Prizes given by the Shire Horse Society.

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- 58 R.N.—F. WHITEHEAD, White Meadow Farm, Ashbourne, for Pinchbeck Fantasy.
H.C.—57.

Class 10.—Shire Geldings, by registered sires, born in or before 1924.¹

- 61 I. (£20).—MANN, CROSSMAN & PAULIN, LTD., Albion Brewery, Whitechapel Road, London, E.1, for Albion Victor, bay, born in 1922, bred by A. A. Naylor, Barton Fields, Church Broughton, Derby; s. Bell Champion 33711, d. 101193 Barton Field Forest Eve by Horning John Bull 32469.
64 II. (£10).—H. T. L. YOUNG, Lambourn House, Lambourn, Berks, for Bower King John, brown, born in 1924, bred by G. R. C. Foster, Anstey Hall, Trumpington; s. Withy Pitts Gay Prince 89072, d. 112308 Medmenham Princess by Welbeck Redlynch 38204.
68 III. (£5).—J. W. WARBURTON, Oaklands Farm, Hale Barns, Altrincham, for Caesar, bay, born in 1922, bred by R. T. Owen, Dwygir, Rhosgoch, Anglesey; s. Shavington Caesar 33531.
59 R. N.—DUNCAN GILMOIR & CO., LTD., 7 Dixon Lane, Sheffield, for Angus.
H. C.—60, 62.

Class 11.—Shire Geldings, by registered sires, born in 1925.¹

- 68 I. (£20).—J. W. WARBURTON, Oaklands Farm, Hale Barns, Altrincham, for Fyde Swell, bay, bred by John Whittingham, Gift Hall, Winmarleigh, Garstang; s. Moulton Swell 3rd 35010.
65 II. (£10).—S. LEGGATE & SON, Dogdyke, Lincoln, for Dogdyke Punch, bay, bred by J. H. Kerman, Orby, Burgh, Leicestershire; s. Tregondale King Cole 33603, d. 104810 Orby Conquering Princess by Tatton Royal William 25693.
69 III. (£5).—J. & W. WHEWELL, LTD., New Bridge Works, Radcliffe, Manchester, for Burston Prime Minister, brown, bred by W. H. Denchfield, Burston House, Aylesbury; s. Monks Green Michael 38408, d. 97823 Burston Primrose by Shopnoller Drayman 30915.
66 R. N.—MANN, CROSSMAN & PAULIN, LTD., Albion Brewery, Whitechapel Road, London, E.1, for Rodney.
H. C.—67.

Clydesdales.

Class 12.—Clydesdale Stallions, born in 1926.

- 70 I. (£20, & Champion).—JAMES KILPATRICK, Craigie Mains, Kilmarnock, for Craigie Philosopher 21469, bay, bred by James Beaton, Mains of Glack, Pitcairley; s. Bonnie Buchlyvie 14032, d. Lady Print 55108 by Dunure Footprint 15203.
72 II. (£10).—JAMES KILPATRICK, Hawkrigg House, Wigton, Cumberland, for Hawkrigg Eclipse 21498, bay, bred by Grant & Young, Arradoul, Buckie; s. Craigie Excellence 19971, d. Arradoul Pride 56583 by Drumcross Medico 18887.
74 III. (£5).—ALEXANDER MURDOCH, East Hallside, Hallside, Glasgow, for Sabatini 21531, black; s. Dunure Footprint 15203, d. Ophelia 55513 by Craigie Litigant 19071.

Class 13.—Clydesdale Stallions, born in 1927.

- 76 I. (£20, & R. N. for Champion).—JAMES KILPATRICK, Craigie Mains, Kilmarnock, for Craigie Eureka (Vol. 50, p. 13), brown, bred by W. Brown, Craigton, Blishton; s. Craigie McQuaid 20724, d. Farleton Lady Alice 47512 by Dunure Footprint 15203.
77 II. (£10).—H. E. ROBERTS, Mereside, Bromfield, Carlisle, for Mereside Monarch (Vol. 50, p. 70), bay; s. Auchentruie 21027, d. Mereside Butterfly 54015 by Craigie Litigant 19071.
78 III. (£5).—W. WRIGHTMAN, Vigo, Chester-le-Street, for Vigo, blue roan; s. Elford 20334 d. Vigo Daisy 52498 by Phillippine 18044.
75 R. N.—R. T. ATKINSON, Acum Farm, West Auckland, for Ringleader.

Class 14.—Clydesdale Mares, born in or before 1925.

- 83 I. (£20, & Champion).—WILLIAM BROWN, Craigton, Blishton, Renfrewshire, for Farleton Lady Alice 47512, black, born in 1914, bred by J. & P. Donald, Lothian, Fyvie, Aberdeenshire; s. Dunure Footprint 15203, d. Chrissy Sleigh 35206 by Everlasting 11331.
84 II. (£10, & R. N. for Champion).—JAMES CAIRNS, Abercromby, St. Monance, Fife, for Abercromby Emma 47287, brown, born in 1916, bred by the late W. Dow, Littleton, Turnberry; s. Dunure Footprint 15203, d. May Culzean 32526 by Revelanta 11876.
86 III. (£5).—JOHN MASHITER, Scales Demesne, Brayton, Cumberland, for Keir Alice (Vol. 47, p. 127), black, born in 1924, bred by W. Wallet, Drumrash, Parton, Kirkcudbright; s. The Blackwood 19292, d. Farleton Primrose 50027 by Dunure Footprint 15203.

Class 15.—Clydesdale Fillies, born in 1926.

- 89 I. (£20).—J. E. KERR, Harviestoun Castle, Dollar, for Harviestoun Aida (Vol. 49, p. 40), brown; s. Drumry Reformer 19698, d. Harviestoun Alma 54631 by Dunure Footprint 15203.

¹ Prizes given by the Shire Horse Society.

² Champion Silver Medal given by the Clydesdale Horse Society for the best Stallion.

³ Champion Silver Medal given by the Clydesdale Horse Society for the best Mare or Filly.

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- 94 II. (£10.)—H. E. ROBERTS, Mereside, Bromfield, Carlisle, for Mereside Nancy (Vol. 49, p. 74), bay; s. Craigie McQuaid 20724, d. Galaxy 48866 by Dunure Footprint 15203.
 91 III. (£5.)—ALEXANDER MURDOCH, East Hallside, Hallside, Glasgow, for Dorothy Vernon (Vol. 49, p. 11), brown, bred by W. Brown, Craigton, Bishopston; s. Bonnie Buchlyvie 14032, d. Farleton Lady Alice 47512 by Dunure Footprint 15203.
 90 R. N.—JAMES KIRKPATRICK, Craigie Mains, Kilmarnock, for Craigie Flower Girl.

Class 16.—Clydesdale Geldings, by registered sires, born in or before 1925.¹

- 99 I. (£20.)—W. S. MILLER, JUNR., Balmanno, Bridge of Earn, for Norman, roan, born in 1922, bred by James Hamilton, Old Liston, Ratho; s. Master Print 20100.
 98 II. (£10.)—GREGG BROTHERS, Housenrigg, Brayton, Carlisle, for Fort, bay, born in 1922, bred by James MacMaster, Balgreggan Mains, Stranraer; s. Dunure Fort 19705, d. by Ascot Chief 15720.

Suffolks.

Class 17.—Suffolk Stallions, born in or before 1924.²

- 103 I. (£20, & Champion.³)—MRS. EVELYN RICH, Wretham Hall, Thetford, for Morston Gold King 5643, born in 1924, bred by Arthur T. Pratt, Morston Hall, Trimley; s. Morston Gold Guard 4234, d. Leda's Queen 7772 by Bawdsey Harvester 3076.
 100 II. (£10.)—MAJOR H. A. BIRKBECK and ALFRED LEWIS, Westacre, King's Lynn, for Horstead Punchinello 5096, born in 1920, bred by Mrs. G. O. Neville, Horstead Hall, Norwich; s. Sudbourne Beau-Brocade 4235, d. Nimble 8787 by Cicero 4135.
 101 III. (£5.)—LIEUT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Sir Harry of Morston 5676, born in 1924, bred by R. H. Wrinch, Harkstead, Ipswich; s. Farnham Beatty 4942, d. Gold Peg 10623 by Morston Gold Guard 4234.

Class 18.—Suffolk Stallions, born in 1925.

- 107 I. (£20, & R. N. for Champion.)—A. PRESTON JONES, Mickleover House, Derby for Morston Orient 5732, bred by Arthur T. Pratt, Morston Hall, Trimley; s. Buckanay Orator 5284, d. Morston White Cross 8970 by Morston Gold Guard 4234.
 110 II. (£10.)—ARTHUR T. PRATT, Morston Hall, Trimley, Ipswich, for Morston Curlew 5730; s. Shotley Counterpart 4903, d. Godwick Rose 9486 by Boulge Musketeer 3666.
 106 III. (£5.)—LIEUT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Beau Brummel of Wychnor 5863, bred by W. Robertshaw, Great Moulton, Tivetshall, Norwich; s. Sudbourne K. 4692, d. Rose 8640 by Wedgewood 3rd 3812.
 111 R. N.—VISCOUNT TREDEGAR, Ruperra Castle, Newport, Mon., for Ashmoor Viscount.

Class 19.—Suffolk Stallions, born in 1926.

- 115 I. (£20.)—OWEN H. SMITH, Langham, Oakham, for Morston Countermand 5820, bred by Arthur T. Pratt, Morston Hall, Trimley; s. Shotley Counterpart 4903, d. Morston Confidence 11416 by Morston Connaught 4590.
 113 II. (£10.)—ARTHUR T. PRATT, Morston Hall, Trimley, Ipswich, for Darsham Duke 5878, bred by Capt. R. J. Catchpole, Darsham, Saxmundham; s. Berden Bacchus 5382, d. Darsham Duchess 8906 by Darsham Sheikh 4139.
 112 III. (£5.)—SIR JAMES HILL, BART., Hexton Manor, Hitchin, for Morston Pilgrim 5819, bred by Arthur T. Pratt, Morston Hall, Trimley; s. Berden Bacchus 5382, d. Blyford Petrina 8693 by Sudbourne Peter 3955.
 114 R. N.—A. CARLYLE SMITH, Sutton Hall, Woodbridge, for Ashmoor Prime Minister.

Class 20.—Suffolk Stallions, born in 1927.

- 119 I. (£20.)—W. N. L. CHAMPION, Riddlesworth Hall, Thetford, for Admiral of Riddlesworth 5986, bred by J. C. Orton, Chattisham, Ipswich; s. Farnham Beatty 4942, d. Lady Jellieco 8874 by Morston Gold Guard 4234.
 121 II. (£10.)—ARTHUR T. PRATT, Morston Hall, Trimley, Ipswich, for Morston Count 5928; s. Shotley Counterpart 4903, d. Morston Confidence 11416 by Morston Connaught 4590.
 123 III. (£5.)—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Red Gold of Wrattling 5932, bred by Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge; s. Worlingham Red Gold 5506, d. Bawdsey Sappho 11350 by Earl Gray 4219.
 118 R. N.—PERCY ADAMS & SONS, Laurel Farm, Felixstowe, for Laurel Premier.

Class 21.—Suffolk Mares, with foals at foot.

- 181 I. (£20, & R. N. for Champion.)—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Bawdsey Sappho 11350, born in 1921 [foal by Worlingham Red Gold 5506], bred by Sir Cuthbert Quilter, Bart., Bawdsey, Woodbridge; s. Earl Gray 4219, d. Bawdsey Minerva 6449 by Bawdsey Harvester 3076.

¹ Prizes given by the Clydesdale Horse Society.

² Prizes given by the Suffolk Horse Society.

³ The "Coronation" Perpetual Silver Challenge Cup, given by the Suffolk Horse Society for the best Stallion.

⁴ Champion Prize of £10 given by the Suffolk Horse Society for the best Mare or Filly.

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- 180 II. (£10).—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Valeta 11849, born in 1921 (foal by Worlingham Red Gold 5500); s. Bawdsey Hay 4188, d. Bawdsey One Step 8665 by Bawdsey Harvest King 3879.
- 182 III. (£5).—FRANK SAINSBURY, for Framlingham Joy 10720, born in 1920 (foal by Framlingham Emperor 5547), bred by W. Woodgate, Framlingham; s. Sudbourne Bellman 4153, d. Badingham Joan 6905 by Smith's Redwald 3346.
- 127 IV. (£4).—THE EARL OF IVEAGH, C.B., C.M.G., Pyrford Court, Woking, for Pyrford Penelope 12400, born in 1923 (foal by Cressing Crusader 5433); s. War Boy 4672, d. Harkstead Sapphire 9892 by Woolverstone Monarch 4266.
- 183 E. N.—P. ROBIN L. SAVILL, Welford Grange, Rugby, for Tattingstone Betty. H. C.—125, 123. C.—129, 134.

Class 22.—*Suffolk Colt Foals, the produce of Mares entered in Class 21.*¹

- 188 I. (£10).—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Sir Roger 5970, born Jan. 28; s. Worlingham Red Gold 5506, d. Bawdsey Valeta 11349 by Bawdsey Hay 4188.
- 140 II. (£5).—OWEN H. SMITH, Langham, Oakham, for foal, born March 16; s. Imperator 4874, d. Shotley Babbler 10777 by Sudbourne Beauchief 4215.
- 139 III. (£3).—FRANK SAINSBURY, Blunts Hall, Little Wratting, Haverhill, for foal, born March 9; s. Worlingham Red Gold 5506, d. Bawdsey Sappho 11350 by Earl Gray 4219.
- 137 E. N.—THE EARL OF IVEAGH, C.B., C.M.G., Pyrford Court, Woking.

Class 23.—*Suffolk Filly Foals, the produce of Mares in Class 21.*¹

- 143 I. (£10).—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Wheatear 14928, born April 20; s. Culverden Cupwinner 5779, d. Bawdsey Haysel 12598 by Framlingham Allenby 4326.
- 141 II. (£5).—SIR JAMES HILL, BART., Hexton Manor, Hitchin, for Hexton Confidence, born March 24; s. Shotley Counterpart 4903, d. Morston Confidence 11418 by Morston Connaught 4590.
- 142 III. (£3).—A. PRESTON JONES, Mickleover House, Derby, for Mickleover Dawn 14927, born April 10; s. Horstead Punchinello 5096, d. Bawdsey Roseate 12804 by Sudbourne Arab 3309.
- 144 E. N.—FRANK SAINSBURY, Blunts Hall, Little Wratting, Haverhill.

Class 24.—*Suffolk Fillies, born in 1925.*

- 15 I. (£20, & Champion).²—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Two-Step 13669; s. Sudbourne Foch 4869, d. Bawdsey Jazz 10807 by Bawdsey Hay 4188.
- 146 II. (£10).—W. G. HARVEY, Kentish Farm, Stisted, Essex, for Martley La Premiere 13541, bred by P. C. Vestey, Wickham Market; s. Sudbourne Premier 4963, d. Ringshall Cavell 10080 by Freston Marshall 4420.
- 145 III. (£5).—LIEUT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Wychnor Wendy 13673; s. Bawdsey Wassail 5132, d. Bawdsey Wench 10825 by Bawdsey Varlet 4390.
- 148 E. N.—SIR JAMES HILL, BART., Hexton Manor, Hitchin, for Queen of Morston.

Class 25.—*Suffolk Fillies, born in 1926.*

- 159 I. (£20).—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Foxrot 14227; s. Sudbourne Foch 4869, d. Bawdsey Jazz 10807 by Bawdsey Hay 4188.
- 158 II. (£10).—ARTHUR T. PRATT, Morston Hall, Trimley, Ipswich, for Morston Composure 14185; s. Shotley Counterpart 4903, d. Morston Dot 7504 by Morston Sunset 3802.
- 153 III. (£5).—W. N. L. CHAMPION, Riddlesworth Hall, Thetford, for Riddlesworth Betony 14236; s. Sudbourne Beauchief 4215, d. Kellythorpe Poppy 11769 by Sudbourne Autoerast 4399.
- 155 IV. (£4).—W. G. HARVEY, Kentish Farm, Stisted, Essex, for Ashmoor Faithful 14199, bred by A. Carlyle Smith, Sutton Hall, Woodbridge; s. Shotley Counterpart 4903, d. Ashmoor Faith 10928 by Sudbourne Arab 3309.
- 160 E. N.—SIR CUTHBERT QUILTER, BART., for Bawdsey Nankin.

Class 26.—*Suffolk Fillies, born in 1927.*

- 166 I. (£20).—SIR CUTHBERT QUILTER, BART., Bawdsey, Woodbridge, for Bawdsey Mazurka 14307; s. Worlingham Red Gold 5506, d. Bawdsey Jazz 10807 by Bawdsey Hay 4188.
- 167 II. (£10).—SIR CUTHBERT QUILTER, BART., for Bawdsey Seedling 14306; s. Worlingham Red Gold 5506, d. Bawdsey Hayseed 9496 by Bawdsey Hay 4188.
- 163 III. (£5).—PERCY ADAMS & SONS, Laurel Farm, Felixstowe, for Raveningham Betty 14497, bred by E. S. Buck & Son, Sycamore Farm, Raveningham; s. Raveningham Cider Cup 5326, d. Raveningham Dawn 11757 by Sudbourne Foch 4869.
- 164 E. N.—FRANK J. CULLEN, Cressing Temple, Essex, for Cressing Caroline.

Class 27.—*Suffolk Geldings, by registered sires, born in or before 1925.*¹

- 170 I. (£20).—THE EARL OF IVEAGH, C.B., C.M.G., Pyrford Court, Woking, for Pyrford Prince, born in 1923; s. War Boy 4672, d. Giltter 10006 by Morston Gold Guard 4234.

¹ Prizes given by the Suffolk Horse Society.

² Champion Prize of £10 given by the Suffolk Horse Society for the best Mare or Filly.

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- 171 **II. (#10).**—MRS. EVELYN RICH, Wretham Hall, Thetford, for Colonel, born in 1920, bred by F. C. Burton, Kessingland; s. Matchless 4628, d. Dainty 8469 by Tollers Vicar 3134.
- 172 **III. (#5).**—MRS. EVELYN RICH, for Potboy, born in 1922, bred by W. Bevan, Plashwood, Haughley, Suffolk; s. Morston Gold Guard 4234, d. Plashwood Poppy 9057 by Sudbourne Arabi 8287.

Percherons.

Class 28.—Percheron Stallions, born in or before 1924.¹

- 173 **I. (#20, & Champion.²)**—J. BAIRD & Co. (FALKIRK), LTD., Bantaskin, Falkirk, for Sharnden Achille 233, black, born in 1923, bred by S. M. Dennis, Mayfield, Sussex; s. Lagor B 1, d. Quartette B 19 by Limon F 99810.
- 180 **II. (#10).**—LIEUT.-COL. H. E. HAMBRO, C.B.E., Coldham Hall, Bury St. Edmunds, for Carburateur B 408, grey, born in 1924, bred by Mons. Crecu, Nogent, France; s. Souvenons F 136704, d. Raguse F 134533 by Mousquet F 106998.
- 181 **III. (#5).**—LIEUT.-COL. H. E. HAMBRO, C.B.E., for Coldham Gunner B 208, light grey, born in 1922; s. Quantelux B 35, d. Pandata B 130 by Luteclen F 102720.
- 177 **R. N.**—MAJOR J. S. COURTAULD, M.C., M.P., Burton Park, Petworth, for Burton Yeoman.

Class 29.—Percheron Stallions, born in 1925.

- 184 **I. (#20, & R. N. for Champion.³)**—J. PIERPONT MORGAN, Wall Hall, Watford, for Histon Drayman 4th B 340, grey, bred by Chivers & Sons, Ltd., Histon, Cambridge; s. Lagor B 1, d. Ustache B 509 by Qualvados F 131498.
- 182 **II. (#10).**—CO-OPERATIVE WHOLESALE SOCIETY, LTD., Estate Office, Coldham, Wisbech, for Elm Lyonnais B 342, grey; s. Salamambo B 86, d. Ucanle B 489 by Luteclen F 102720.

Class 30.—Percheron Stallions, born in 1926.

- 186 **I. (#20, & Champion.⁴)**—CHIVERS & SONS, LTD., Histon, Cambridge, for Stourhead Leontes B 360, grey, bred by Sir Henry H. A. Hoare, Bart., Stourhead, Zeals; s. Lagor B 1, d. Quognitive B 53 by Mercy F 105783.
- 188 **II. (#10, & R. N. for Champion.⁵)**—C. WILSON, Riseholme, Lincoln, for Riseholme Quaeator B 407, grey; s. Bargaly Chieftain B 16, d. Quapucine B 121 by Misanthrope F 106210.
- 187 **III. (#5).**—SIR HENRY H. A. HOARE, BART., Stourhead, Zeals, Wilts, for Histon Drayman 5th B 368, grey, bred by Chivers & Sons, Ltd., Histon, Cambridge; s. Villabon B 276, d. Perthie B 178 by Japon F 84819.

Class 31.—Percheron Stallions, born in 1927.

- 197 **I. (#20).**—J. F. MONTAGU, Cold Overton Hall, Oakham, for Orton Ocean B 379, Iron grey; s. Hobland Demon B 218, d. Ole B 62 by Jaddus F 89198.
- 190 **II. (#10).**—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Drayman 9th B 410, grey; s. Lagor B 1, d. Prolifere B 191 by Jugal F 85444.
- 194 **III. (#5).**—GUY FENWICK, North Luffenham Hall, Stamford, for Luffenham Fury B 398, grey; s. Hobland Demon B 218, d. Sarre B 326 by Napoleon F 114031.
- 191 **IV. (#4).**—CHIVERS & SONS, LTD., for Histon Drayman 10th B 411, grey; s. Lagor B 1, d. Servorio B 534 by Importun F 80576.
- 195 **R. N.**—MAJOR J. FENWICK HARRISON, King's Walden Bury, Hitchin, for King's Walden Briton.

Class 32.—Percheron Mares, with Foals at foot.

- 199 **I. (#20, & Champion.⁶)**—ALFRED BRIDGESTOCK, Cranley, Gaul Road, March, for Bandruche B 685, light grey, born in 1923 [foal by Hache Viking B 144], bred by L. Gulon, Landes, Bellous Hulsne, Orne; s. Grosly F 130288, d. Nattiere F 114659.
- 209 **II. (#10).**—J. PIERPONT MORGAN, Wall Hall, Watford, for Servorio B 534, grey, born in 1918 [foal by Villabon B 276], bred by M. Maillefert, Cruchet, Ventes-De-Bourse, Mesle-s.-Santho; s. Importun F 80576, d. Nazareenne F 116845 by Healine F 75604.
- 203 **III. (#5).**—CO-OPERATIVE WHOLESALE SOCIETY, LTD., Estate Office, Coldham, Wisbech, for Utelle B 494, grey, born in 1920 [foal by Salamambo B 86], bred by Henri Perpere, Frossard, Pin-la-Garenne, France; s. Medisant F 105527, d. Orvale F 123215 by Jan F 84219.
- 210 **IV. (#4).**—J. PIERPONT MORGAN, for Ustache B 509, grey, born in 1920 [foal by Huntley Perscus B 209], bred by M. Besnier, Bout-du-Bois, Orignyle-Roux; s. Qualvados F 131498, d. Officielle F 119063 by Joicoeur F 85324.
- 201 **R. N.**—LIEUT.-COL. SIR MERRICK B. BURRELL, BART., C.B.E., Knepp Castle Estate Office, Horsham, for Palombe.

Class 33.—Percheron Colt or Filly Foals, the produce of Mares in Class 32.¹

- 214 **I. (#10).**—CO-OPERATIVE WHOLESALE SOCIETY, LTD., Estate Office, Coldham, Wisbech, for grey filly, born Feb. 6; s. Salamambo B 86, d. Utelle B 494 by Medisant F 105527.

¹ Prizes given by the British Percheron Horse Society.

² Perpetual Silver Challenge Cup, given by the British Percheron Society for the best Stallion.

³ Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Stallion in Class 30, born in Great Britain.

⁴ Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Mare or Filly.

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- 211 II. (£5.)—ALFRED BRIDGSTOCK, Cranley, Gaul Road, March, for black grey colt, born March 5; s. Hache Viking B 144, d. Baudruche B 685 by Quolay F 180288.
 212 III. (£3.)—LIEUT.-COL. SIR MERRIK R. BURRELL, BART., C.B.E., Knepp Castle Estate Office, Horsham, for grey colt, born April 29; s. Knepp Xanthos B 260, d. Palombe B 29 by Irradie F 83254.
 219 R. N.—J. PIERPONT MORGAN, Wall Hall, Watford.

Class 34.—Percheron Fillies, born in 1925.

- 221 I. (£20, & R.N. for Champion.)—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Lady Grey B 721, grey; s. Villabon B 276, d. Pettronne B 176 by Japon F 84819.
 225 II. (£10.)—C. WILSON, Riseholme, Lincoln, for Riseholme Reaction B 665, grey; s. Misanthrope B 5, d. Recreation B 666 by Lagor B 1.
 223 III. (£5.)—LIEUT.-COL. H. E. HAMBRÖ, C.B.E., Coldham Hall, Bury St. Edmunds, for Diabliesse B 852, grey, bred by Mons. Richard, St. Jean de la Foret, Noce, Mortagne; s. Quaduc F 129371, d. Ritoujours F 132834 by Japon F 84819.
 224 R. N.—SIR HENRY H. A. HOARE, BART., Stourhead, Zeals, Wilts, for Stourhead Nera.

Class 35.—Percheron Fillies, born in 1926.

- 227 I. (£20, & Champion.)—CO-OPERATIVE WHOLESALE SOCIETY, LTD., Estate Office, Coldham, Wisbech, for Elm Irene B 768, grey; s. Salammbô B 86, d. Utelle B 494 by Medisant F 105527.
 230 II. (£10, & R. N. for Champion.)—MAJOR J. S. COURTAULD, M.C., M.P., Burton Park, Petworth, for Burton Abbess B 739, grey; s. Prescient B 17, d. Quonjointe B 220 by Myrmidon F 109533.
 232 III. (£5.)—LIEUT.-COL. H. E. HAMBRÖ, C.B.E., Coldham Hall, Bury St. Edmunds, for Escargole B 849, grey, bred by M. Guineau, Nogent, France; s. Vallery F 152416, d. Ubage F 145045 by Josué F 88841.
 226 R. N.—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Limoselle 2nd.

Class 36.—Percheron Fillies, born in 1927.

- 234 I. (£20.)—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Andromaque B 831, grey; s. Lagor B 1, d. Andromaque B 517 by Quaduc F 129371.
 235 II. (£10.)—CHIVERS & SONS, LTD., for Histon Lady 6th B 835, grey; s. Mylord B 275, d. Histon Lady 2nd B 375 by Brilliant H. B 42.
 236 III. (£5.)—GUY FENWICK, North Luffenham Hall, Stamford, for Luffenham Harpy B 843, grey; s. Hobland Demon B 218, d. Nordica B 135 by Stonewall A 56216.
 237 R. N.—SIR HENRY H. A. HOARE, BART., Stourhead, Zeals, Wilts, for Stourhead Tirelire.

Class 37.—Percheron Geldings, by registered sires, born in or before 1924.*

- 240 I. (£20.)—ALFRED BRIDGSTOCK, Cranley, Gaul Road, March, for River Acrobat B 270, grey, born in 1923, bred by A. W. Handy, Haycroft, Sherborne, Northleach; s. Quantelux B 35, d. Fancy B 124, by Jean A 89672.
 243 II. (£10.)—ROBERT CRYSTAL IRVING, Shenley Lodge, Ridge Hill, Barnet, for Broadbridge John B 181, grey, born in 1922, bred by Stanley H. Scott, Lower Broadbridge, Horsham; s. Quantelux B 35, d. Bobinette B 184 by Jordan F 88848.
 243 III. (£5.)—CHIVERS & SONS, LTD., Histon, Cambridge, for Sergeant, grey, born in 1922; s. Brilliant H. B 42.
 249 IV. (£4.)—ROBERT CRYSTAL IRVING, for Charley Reynolds, dapple grey, born in 1922, bred by Edward Mitchell, Flue File Farm, Stibbard, Guist, Norfolk; s. Misanthrope B 5.
 247 R. N.—MAJOR J. FENWICK HARRISON, King's Walden Bury, Hitchin, for King's Walden Warrior.

Hunters.

Class 38.—Hunter Mares, with Foals at foot.

- 263 I. (£20, & Champion.)—THOMAS AND HENRY WARD, High Farm Stud, Pinchinthorpe, Guisborough, for 6394 Nada Ross, brown, born in 1918 [foal by Perlostean], bred by James Clarke, Balreask, Ireland; s. Captain Ross, d. Nada the Lily by Spook.
 251 II. (£10.)—LIEUT.-COL. SIR MERRIK R. BURRELL, BART., C.B.E., Knepp Castle Estate Office, Horsham, for 5739 Blood Ruby, brown, born in 1918 [foal by St. Twdal]; s. The Best 147, d. 3201 Princess Ruby by Red Prince 2nd.
 255 III. (£5.)—WALTER J. FRYER, C.B.E., Holme Park, Sonning, Berks, for 5847 Larch, bay, born in 1911 [foal by Hastatus], bred by Col. E. C. Meysey Thompson, Knaresboro', Yorks; s. Birk Gill 178, d. Britannia.

* Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Mare or Filly.

* Perpetual Silver Challenge Cup, given by the British Percheron Horse Society for the best Filly in Class 35, born in Great Britain.

* Prizes, except Fourth, given by the British Percheron Horse Society.

* Champion Gold Medal, given by the Hunters' Improvement and National Light Horse Breeding Society, for the best Mare four years old and upwards, which must be either registered in the Hunter Stud Book, or the entry tendered within a month of the Award.

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- 256 IV. (24.)—MISS R. M. HARRISON, Maer Hall, Newcastle, Staffs, for Nell Gwynne, chestnut, born in 1916 [foal by Tredennord].
 253 R. N.—CAPT. J. R. C. COWAN, Kersknowe, Kelso, for Sonia 3rd.
 H. C.—254.

Class 39.—Hunter Colt Foals, the produce of Mares in Class 38.

- 271 I. (210.)—THOMAS and HENRY WARD, High Farm Stud, Pinchinthorpe, Guisborough, for brown, born April 12; s. Perlostium, d. 6349 Nada Ross by Captain Ross.
 267 II. (25.)—MISS R. M. HARRISON, Maer Hall, Newcastle, Staffs, for dark chestnut, born May 14; s. Tredennord, d. Nell Gwynne by King's Courtship.
 266 III. (23.)—GEORGE DICKINSON, Cark Mills, Cark-in-Cartmel, for Cark Foxprint, bay, born March 28; s. Silver Fox C., d. 6265 Cark Bridgett.
 265 R. N.—CAPT. J. R. C. COWAN, Kersknowe, Kelso.

Class 40.—Hunter Filly Foals, the produce of Mares in Class 38.

- 274 I. (210.)—ROBSON SCOTT, Hightown Hill, Ringwood, Hants, for Marchmist, brown, born April 5; s. Marchmond, d. 6435 Optimist.
 273 II. (25.)—WALTER J. FRYER, C.B.E., Holme Park, Sonning, Berks, for bay, born April 1; s. Hastatus, d. 5847 Larch by Birk Gill 178.
 272 III. (23.)—LIEUT.-COL. SIR MERRIK R. BURRELL, BART., C.B.E., Knepp Castle Estate Office, Horsham, for bay or brown, born April 28; s. St. Tudwal, d. 5739 Blood Ruby by The Best 147.

Class 41.—Hunter Mares (Novice), with Foals at foot.

- 278 I. (220, & R. N. for Champion.)—FREDERICK ROWE, Cavendish Lodge, Mansfield, for Eventful, bay, born in 1921 [foal by Silonyx], bred by G. Godson, Aswarby, Sleaford; s. Irawaddy.
 279 II. (210.)—FRANCIS SAMUELSON, Breckenbrough Hall, Thirsk, Yorks, for 6218 Scottree, bay, born in 1923 [foal by Erehwemos]; s. Flying Scot, d. 4965 Dream by Drummer Kelly.
 277 III. (25.)—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for 6945 Mermaid 15th, bay, aged [foal by Mankato]; s. Birkgill 178.
 275 R. N.—GUY FENWICK, North Luffenham Hall, Stamford, for Santa Gertrudis.

Class 42.—Hunter Colt Foals, the produce of Mares in Class 41.

- 281 I. (210.)—FRANCIS SAMUELSON, Breckenbrough Hall, Thirsk, for Mosstrooper, bay, born May 3; s. Erehwemos, d. 6218 Scottree by Flying Scot.
 282 II. (25.)—A. and D. WALKER, Woodhouse, Tutbury, Burton-on-Trent, for Cuckoo, bay, born April 25; s. Stronghold, d. Cara by Caubeau.

Class 43.—Hunter Filly Foals, the produce of Mares in Class 41.

- 285 I. (210.)—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for bay, born April 6; s. Mankato, d. 6945 Mermaid 15th by Birk Gill 178.
 286 II. (25.)—FREDERICK ROWE, Cavendish Lodge, Mansfield, for chestnut, born April 25; s. Silonyx, d. Eventful by Irawaddy.
 283 III. (23.)—GUY FENWICK, North Luffenham Hall, Stamford, for bay, born April 10; s. Tremola, d. 5690 Santa Gertrudis by Santal.

Class 44.—Hunter Fillies, born in 1925.

- 287 I. (220, & R. N. for Champion.)—MRS. M. S. ELLISOV, Ashfield, Malton, for 6987 Mercenary Mary, brown, bred by W. B. Brown, Southholme, Silingsby, Yorks; s. Dunholm, d. 5670 Proud Mary by Proudridge.
 289 II. (210.)—T. S. HUGHES, Dingley Lodge, Market Harborough, for Danish, bay, bred by Sir George Renwick, Westminster Abbey, Morpeth; s. Dunholm, d. Ishani by Santry.
 291 III. (25.)—MRS. C. I. SMITH-RYLAND, Barford Hill, Warwick, for 6736 Snail 3rd, bay; s. Gay Lally, d. 6025 Snail 2nd by Kilmarnock.

Class 45.—Hunter Fillies, born in 1926.

- 293 I. (220, & Champion.)—MAJOR CLIVE BEERENS, Swinton Grange, Malton, for 6799 Swinton Honora, brown; s. Dunholm, d. 4106 Heather 3rd by Scotch Sign.
 297 II. (210.)—MISS R. M. HARRISON, Maer Hall, Newcastle, Staffs, for Film Star, chestnut; s. Huntly Gowk 186, d. 6232 New Star by Travelling Lad.
 296 III. (25.)—WALTER J. FRYER, C.B.E., Holme Park, Sonning, Berks, for 6643 La-Tanta, bay; s. Tantamount, d. 5847 Larch by Birk Gill.
 295 R. N.—W. LINDSAY EVERARD, M.P., Ratcliffe Hall, Leicester, for Gay Lass 10th.

¹ Champion Gold Medal, given by the Hunters' Improvement and National Light Horse Breeding Society, for the best Mare four years old and upwards, which must be either registered in the Hunter Stud Book, or the entry tendered within a month of the Award.

² Champion Gold Medal, given by the Hunters' Improvement and National Light Horse Breeding Society, for the best Filly not exceeding three years old, which must be either registered in the Hunter Stud Book, or the entry tendered within a month of the Award.

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Class 46.—Hunter Fillies, born in 1927.

- 299 I. (220).—CAPT. J. R. C. COWAN, Kersknowe, Kelso, for 6888 Sonally, bay; s. Gay Lally, d. 6627 Sonia 3rd by Newburgh.
 307 II. (210).—JOHN EDWARD JONES, Treworgan, Ross, Herefordshire, for 6029 Juliette, brown; s. Forum, d. 6889 Cardona by Cardonald.
 300 III. (25).—JOHN DRUMMOND, Megginch Castle, Errol, for 6989 Vaudeville, chestnut, bred by Mrs. John Drummond, Megginch Castle, Errol; s. Harmonius, d. Actress.
 306 IV. (24).—FAWCETT HIGNETT, The Nook, West Derby, Liverpool, for 6981 Flying Hebe, chestnut; s. Top Covert, d. 6449 Flying Hornet by Serlby Drake.
 309 E. N.—MRS. HOWARD MANDER, Trysull Manor, Wolverhampton, for Veronica.

Class 47.—Hunter Geldings, born in 1925.

- 323 I. (220).—MRS. E. M. VAUGHAN, Blackladies, Brewood, Stafford, for Rover 977, chestnut, bred by G. P. Ballard, Park Farm, Shifnal; s. King Midas, d. 6565 Melrose 4th.
 311 II. (210).—MAJOR CLIVE BEHRENS, Swinton Grange, Malton, for Fleet-o'-gate 1070, chestnut; s. Aynsley, d. 6151 Flemish Queen by Pericles.
 316 III. (25).—JOHN EDWARD JONES, Treworgan, Ross, Herefordshire, for Astonishment, chestnut, bred by W. E. Jones, Trwstllewelyn, Garthmyl, Mont.; s. Great Surprise, d. Naiveté by Le Blizon.
 320 IV. (24).—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for Topsail 061, brown; s. Top Covert, d. 6790 Sea Gull 8th by Prince Charles 2nd.
 314 V. (23).—W. LINDSAY EVERARD, M.F., Ratcliffe Hall, Leicester, for Drake 2nd 1057, chestnut, bred by Mrs. Hunt, East Bridgeford, Nottingham; s. Indian Runner.
 319 R. N.—MAJOR W. H. RAWNSLEY, for Top Gallant.
 H. C.—312.

Class 48.—Hunter Geldings, born in 1926.

- 329 I. (220).—LADY BERYL GILBERT, Revesby Abbey, Boston, Lincs, for Revesby 916, bay; s. Mankato, d. 6264 Lady Beryl by Reynard.
 335 II. (210).—MRS. E. M. VAUGHAN, Blackladies, Brewood, Stafford, for Tantol, chestnut, bred by A. McCann, Navan, Co. Meath; s. Tangiers, d. Cloyot by Santol.
 327 III. (25).—JOHN DRUMMOND, Megginch Castle, Errol, for Irish Jig 1080, bay, bred by Mrs. John Drummond, Megginch Castle, Errol; s. Harmonious, d. Bridget.
 331 IV. (24).—MRS. HOWARD MANDER, Trysull Manor, Wolverhampton, for John Peel, bay, bred by Lt.-Col. Sir Merrick R. Burrell, Bart., C.B.E., Knepp Castle, Horsham; s. The Best 147, d. 5330 The Belle by Hanover Square.
 328 R. N.—LADY BERYL GILBERT, for Bob's Choice.

Class 49.—Hunter Colts or Geldings, born in 1927.

- 346 I. (220).—SIR HENRY H. A. HOARE, BART., Stourhead, Zeals, Wilts, for Tidal 1040 bay gelding; s. Tidal Wave, d. 6697 Lady Dorchester by Barbed Fence.
 349 II. (210).—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for Topmast, chestnut colt; s. Top Covert, d. 5470 Mermaid 8th by Ocean Wave.
 350 III. (25).—MRS. E. M. VAUGHAN, Blackladies, Brewood, Stafford, for Alston, bay colt, bred by G. P. Ballard, Park Farm, Shifnal; s. The Alder, d. Miss Heston by Heston.
 339 IV. (24).—MISS DAWSON, Etwell Hall, Derby, for Woodsprite, chestnut gelding; s. Top Covert, d. 6370 Witch Dance by Ipswich.
 347 V. (23).—R. MACHIN, Old Thornville, Kirk Hammerton, York, for Kirkealdy, chestnut colt, bred by Sir R. S. Nairn, Leslie, Fifeshire; s. Scarlet Rambler, d. Frisk by Tanlaw.
 341 R. N.—MISS MARY K. DEAN, The Hall, Carlton Scroop, Grantham, for Marshmallows.

Special Produce Prizes of £3 each, given by the R.A.S.E., and Second Prizes of £1 each, by the Hunters' Improvement and National Light Horse Breeding Society, for the two best groups of three young animals in Classes 44 to 49, by the same Thoroughbred or Registered Hunter Sire. A Gold Medal was given by the H.I. & N.L.H.B.S. to the owner of the sire of the winning group, and a Silver Medal to the owner of the sire of the second group.

Sired by DUNHOLM.

- 287 Mercenary Mary, brown filly, exhibited by MRS. M. S. ELLISON.
 239 Dunish, bay filly, exhibited by T. S. HUGHES.
 293 Swinton Honors, brown filly, exhibited by MAJOR C. BEHRENS.

Sired by TOP COVERT.

- 306 Flying Hebe, chestnut filly, exhibited by FAWCETT HIGNETT.
 320 Topsail, brown gelding, exhibited by MAJOR W. H. RAWNSLEY.
 349 Topmast, chestnut colt, exhibited by MAJOR W. H. RAWNSLEY.

Polo and Riding Ponies.

Class 50.—Polo and Riding Pony Mares, with Foals at foot, not exceeding 15 hands.

- 352 I. (220, Champion,¹ & Champion.²)—H. BRIGHT, The Cove, Silverdale, Carnforth, for 4168 Silvery 2nd, brown, born in 1914 [foal by Tabarin], bred by the late Sir John Barker, Bishop's Stortford; s. Right For'ard 368, d. 1631 Silver Queen by Sandway 121.
 361 II. (210.)—MRS. JOHN G. PEEL, Peover Hall, Knutsford, for Snowflake 2nd (Approved Mare Register, p. 273), white, aged [foal by Jazz Band 1449], bred by P. Power, Rathkeal, Co. Limerick; s. Goblet (G.S.B.), d. by Thory (G.S.B.).
 354 III. (25.)—MRS. M. M. FITZGERALD, Marsden Manor, Cirencester, for Blonde (Approved Mare Register, p. 108), chestnut, aged [foal by Cherry Tint 761].
 357 IV. (24, & R. N. for Champion.³)—TRESHAM GILBEY, Whitehall, Bishop's Stortford, for Emerald 3rd (Approved Mare Register, p. 248), chestnut, aged [foal by Wild Tint 1207].
 355 R. N.—CAPT. W. H. FRANCE-HAYHURST, Bostock Hall, Middlewich, for Coronet.

Class 51.—Polo and Riding Pony Fillies or Geldings, born in 1925.

- 366 I. (220.)—TRESHAM GILBEY, Whitehall, Bishop's Stortford, for Scots Grey (Supp. 1925), dark grey gelding, bred by Capt. Stanley Benny, 42 Dover Street London; s. Bridge-water (G.S.B.), d. 3888 Lady Grey.
 362 II. (210, & R. N. for Champion.³)—H. BRIGHT, The Cove, Silverdale, Carnforth, for Silverdale Aquaint (Supp. 1925), bay filly; s. Cherry Tint 761, d. 4168 Silvery 2nd by Right For'ard 368.
 364 III. (25.)—MISS B. G. CORY-WRIGHT, Little Gaddesden, Berkhamsted, Herts, for Cherry Leaf (Supp. 1925), bay gelding; s. Cherry Tint 761, d. Silhouette (Approved Mare Register, p. 156).
 365 R. N.—CAPT. W. H. FRANCE-HAYHURST, Bostock Hall, Middlewich, for Rosina.

Class 52.—Polo and Riding Pony Colts, Fillies or Geldings, born in 1926.

- 369 I. (220, Champion,⁴ & R. N. for Champion.⁵)—MRS. DAVIES-COOKE, Gwysaney, Mold, for Calla (Supp. 1926), dark chestnut filly, bred by P. T. Davies-Cooke, Gwysaney, Mold; s. The Marne 1075, d. 3822 Calico by Don Patricio 592.
 367 II. (210.)—H. BRIGHT, The Cove, Silverdale, Carnforth, for Silverdale Chirrup (Supp. 1926), chestnut gelding; s. Silverdale Cheerio 1920, d. Medina (Approved Mare Register, p. 90).
 372 III. (25.)—TRESHAM GILBEY, Whitehall, Bishop's Stortford, for Soldier Boy (Supp. 1926), chestnut colt; s. Royal Recruit (Supp. 1922), d. Miss Hilder (Approved Mare Register, p. 128).
 368 R. N.—MISS B. G. CORY-WRIGHT, Little Gaddesden, Berkhamsted, for Lucinda.

Class 53.—Polo and Riding Pony Colts, Fillies or Geldings, born in 1927.

- 376 I. (220.)—MRS. M. M. FITZGERALD, Marsden Manor, Cirencester, for Black Lead (Supp. 1927), dark brown filly; s. Thruster 1123, d. Black Bess 19th (Approved Mare Register, p. 107).
 377 II. (210.)—CAPT. W. H. FRANCE-HAYHURST, Bostock Hall, Middlewich, for Coral 2nd (Supp. 1927), chestnut filly; s. Bachelor's Image, d. 4900 Coronet by Little Corona 814.
 379 III. (25.)—TRESHAM GILBEY, Whitehall, Bishop's Stortford, for Rusty Tint (Supp. 1927), chestnut colt; s. Wild Tint 1207, d. Rusty (Approved Mare Register, p. 38).
 382 R. N.—MRS. JOHN G. PEEL, Peover Hall, Knutsford, for Snowflake 3rd.

Welsh Mountain Ponies.

Class 54.—Welsh Mountain Pony Stallions, born in or before 1925, not exceeding 12 hands.

- 388 I. (215.)—LORD SWANSEA, D.S.O., M.V.O., Caer Beris, Builth, Breconshire, for Caer Beris King Cole 9958, grey, born in 1917, bred by Mrs. H. D. Greene, Grove, Craven Arms; s. Grove King Cole 2nd 665, d. 4431 Grove Sprite 2nd by Grove Ballstute 200.
 384 II. (210.)—MISS N. MATHIESON, Gateshead Cottage, Tattenhall, Chester, for Gateshead Magic 1315, black, born in 1923, bred by Mrs. H. O. Wykeham, Inwoods, Rugby; s. Cole Tit, d. 6321 Dunehurch Judy 2nd by Grove Wild Wales 698.
 383 III. (25.)—JOHN JONES & SON, Dinarth Hall Pony Stud, Colwyn Bay, for Llwyn Satan 1325, dark grey, born in 1923, bred by Major W. Marshall Dugdale, D.S.O., Llwyn Stud Farm, Llanfyllin, Mont.; s. Kilhendre Celtic Silverlight 953, d. 6086 Llwyn Tempter by Temptation 527.
 387 R. N.—LORD SWANSEA, D.S.O., M.V.O., for Caer Beris Epsom.

¹ Champion Gold Medal, given by the National Pony Society for the best Mare or Filly.

² Bronze Medal, given by the National Pony Society for the best Foal in Class 50 entered in the Supplement to the National Pony Stud Book.

³ Champion Silver Medal, given by the National Pony Society for the best Filly.

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Class 55.—*Welsh Mountain Pony Mares, with Foals at foot, not exceeding 12 hands.*

- 389 I. (£15).—CAPT. H. A. BELLVILLE, Tedstone Court, Bromyard, for 6037 Grove Firelight, brown, born in 1917 [foal by Grove King Cole 2nd 565], bred by Mrs. H. D. Greene, Grove, Craven Arms; s. Shooting Star 73, d. 3017 Grove Twilight by Grove Ballistite 200.
- 392 II. (£10).—MISSSES MAY and SUMMERS, Church Moor, Church Stretton, for 5992 Clumber Miss Mary, dapple grey, born in 1917 [foal by Grove Elfin 729], bred by the Duchess of Newcastle, Clumber Park, Worksop; s. Hardwick Conqueror 668, d. 3758 Clumber Janet 3rd by Hardwick Sensation 670.

Shetland Ponies.

Class 56.—*Shetland Pony Stallions, born in or before 1925, not exceeding 10·2 hands.*

- 397 I. (£15, & Champion.¹)—MRS. ETTA DUFFUS, Penniwells, Elstree, Herts, for Dibblitz of Penniwells 1087, black, born in 1920; s. Blitz 848, d. 2193 Diddy by Diamond 257.
- 399 II. (£10, & R. N. for Champion.¹)—R. W. R. MACKENZIE, Carpow, Newburgh, Fife, for Brass Hat, black, born in 1923, bred by Francis N. M. Gourlay, Tynron, Thornhill, Dumfriesshire; s. Helmet of Earlsall 408, d. 2327 Della by Thor 83.
- 398 III. (£5).—MRS. ETTA DUFFUS, for Marvel of Earlsall, black, born in 1924, bred by R. W. R. Mackenzie, Carpow, Newburgh, Fife; s. Helmet of Earlsall 408, d. 3930 Margery of Weddiker by Minotaur 607.
- 395 R. N.—MRS. BETTY COX, Marshwood Manor, Bridport, for Bandana 1185, skewbald, born in 1924, bred by William Roy, St. Ives, Crief, Scotland; s. Glenbrittle Chief 992, d. 2579 Kerchief 2nd by Flint 240.

Class 57.—*Shetland Pony Mares, with Foals at foot, not exceeding 10·2 hands.*

- 403 I. (£15).—MRS. ETTA DUFFUS, Penniwells, Elstree, Herts, for Peace of Coin, black, born in 1919 [foal by Discoverer of Penniwells 1154], bred by Lady S. Hicks-Beach, Coin St. Aldwyn, Fairford; s. Patriot 935, d. 3689 Peashlossom by Donner 755.
- 404 II. (£10).—R. W. R. MACKENZIE, Carpow, Newburgh, Fife, for 3927 Emery of Earlsall, grey, born in 1914 [foal by Gluss Norseman 759]; s. Bridegroom of Earlsall 400, d. 1940 Emily 2nd by Handfu 224.
- 401 III. (£5).—MRS. BETTY COX, Marshwood Manor, Bridport, for 760 Eventide, skewbald, born in 1919 [foal by Lord of Tingo 928].

Riding Classes.²

HUNTERS.

Class 58.—*Hunter Mares or Geldings, born in 1924.*

- 436 I. (£15).—W. J. SMITH, LTD., 21 Little Cadogan Place, London, S.W.1, for Jason, bay gelding.
- 420 II. (£10).—SPENCER GORDON FREEMAN, Forsefell, Little Bealings, Suffolk, for Timothy of Clonsilla, chestnut gelding.
- 430 III. (£5).—MRS. HOWARD MANDER, Trysull Manor, Wolverhampton, for Gentleman Robert (Supp. No. 855), chestnut gelding, bred by G. P. Ballard, Park Farm, Shifnal, Salop; s. King Midas, d. 6362 Miss Heston by Heston.
- 410 IV. (£3).—W. B. BROWN, Southolme, Slingsby, Yorks, for Dunthorn, bay gelding, bred by T. Marton, Salton Manor, Sillington; s. Dunholm, d. by Crathorne.
- 432 R. N.—C. J. PHILLIPS, Old Dalby Hall, Melton Mowbray, for Boy Brian.

Class 59.—*Hunter Mares or Geldings (Novice), born in or before 1924, up to from 12 to 14 stones.*

- 446 I. (£15).—JOHN DARBY, Hillmorton, Rugby, for Red Robin, chestnut gelding, born in 1923.
- 455 II. (£10).—HON. EDWARD GREENALL, Red House, Melton Mowbray, for Radiant Sun, brown gelding, born in 1920, bred by the National Stud; s. Sunstar, d. Oscar Marn.
- 451 III. (£5).—JOHN DRAGE, Chapel Brampton, Northampton, for Marigold, brown mare, born in 1923.
- 457 IV. (£3).—LADY HUNLOKE, 80 Knightsbridge, London, S.W.1, for Puzzle, bay gelding, born in 1923.
- 430 R. N.—MRS. HOWARD MANDER, for Gentleman Robert. (See Class 58.)

Class 60.—*Hunter Mares or Geldings (Novice), born in or before 1924, up to more than 14 stones.*

- 452 I. (£15).—JOHN DRAGE, Chapel Brampton, Northampton, for Rufus, chestnut gelding, born in 1921.

¹ Champion Silver Medal, given by the Shetland Pony Stud Book Society, for the best Shetland Pony.

² Prizes given by the Nottingham Local Committee.

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- 466 II. (£10).—R. WEAVER, Castletown, Farndon, Cheshire, for Charlie Chaplin, brown gelding, born in 1922.
 420 III. (£5).—SPENCER GORDON FREEMAN, for Timothy of Clonsilla. (See Class 58.)
 464 IV. (£3).—MAJOR J. L. NICKISSON, Hinton Manor, Swindon, for Robert, brown gelding, born in 1921.

Class 61.—Hunter Mares or Geldings, born in or before 1924, up to not more than 14 stones. Suitable to carry a lady, and to be ridden by a lady, side-saddle.

- 490 I. (£15).—MAJOR V. D. S. WILLIAMS, Greens Norton Court, Towcester, for Wait and See 6905, chestnut mare, born in 1921.
 474 II. (£10).—O. G. MOSELEY, Agden Hall, Agden, Lymn, Cheshire, for Scotch Bun, brown gelding, born in 1922.
 457 III. (£5).—LADY HUNLOKE, for Puzzle. (See Class 59.)
 448 IV. (£3).—JOHN DARBY, Hillmorton, Rugby, for Leap Frog, chestnut gelding, born in 1923.
 455 R. N.—THE HON. EDWARD GREENALL, for Radiant Sun. (See Class 59.)
 C.—475.

Class 62.—Hunter Mares or Geldings, born in or before 1924, up to from 12 to 13.7 stones.

- 427 I. (£20).—JOHN EDWARD JONES, Treworgan, Ross, Herefordshire, for Red Rufus, chestnut gelding, born in 1923, bred by G. Jones, Delbury, Craven Arms; s. Bachelor's Image, d. Betty by Red Sahib.
 478 II. (£15).—MRS. E. M. VAUGHAN, Blackladies, Brewood, Stafford, for Golden Friar (Supp. No. 1021) (G.S.B.), chestnut gelding, born in 1923, bred by Washington Singer s. Friar Marcus, d. Mot d'Or by Chaucer.
 448 III. (£10).—JOHN DARBY, for Red Robin. (See Class 59.)
 451 IV. (£5).—JOHN DRAGE, for Marigold. (See Class 59.)
 474 V. (£3).—O. G. MOSELEY, for Scotch Bun. (See Class 61.)
 475 R. N.—J. KENNETH STEVENSON, The Chase, Upper Welland, Malvern Wells, for Osberton.
 C.—455.

Class 63.—Hunter Mares or Geldings, born in or before 1924, up to more than 13.7 and not more than 15 stones.

- 490 I. (£20, & Champion.¹)—MAJOR V. D. S. WILLIAMS, for Wait and See. (See Class 61.)
 481 II. (£15, & R. N. for Champion.¹)—LT.-COL. T. D. ALEXANDER, Remount Depot, Melton Mowbray, for Director, bay gelding, born in 1922.
 449 III. (£10).—JOHN DARBY, Hillmorton, Rugby, for General, bay gelding, born in 1920.
 484 IV. (£5).—MAJOR T. H. C. WEBSTER, Glangrwyney Court, Crickhowell, South Wales, for Greenane, brown gelding, born in 1923, bred by G. Nugent, Greenane, Clonmel, Ireland; s. Kiltel, d. Molly by The Rake.
 483 V. (£3).—CAPT. V. H. HOLZ, Lingmoor, Kirbymoorside, York, for Sandstorm, brown gelding, born in 1920.

Class 64.—Hunter Mares or Geldings, born in or before 1924, up to more than 15 stones.

- 452 I. (£20).—JOHN DRAGE, for Rufus. (See Class 60.)
 476 II. (£15).—J. KENNETH STEVENSON, The Chase, Upper Welland, Malvern, for Blue Train, bay gelding, born in 1922.
 450 III. (£10).—JOHN DARBY, Hillmorton, Rugby, for Emperor, bay gelding, born in 1922.
 466 IV. (£5).—R. WEAVER, for Charlie Chaplin. (See Class 60.)
 486 V. (£3).—D. P. BARNETT, Danygraig, Newton, Porthcawl, Glam., for Big Ben, light bay gelding, born in 1922.

HACKS.

Class 65.—Hack Mares or Geldings, not exceeding 15 hands.

- 506 I. (£15).—THE DOWAGER LADY PENRYN, Wicken Park, Stony Stratford, for Susannah, black mare, born in 1923; s. Prince Friarstown, d. Hannah Ann by Charl.
 501 II. (£10).—LADY MURIEL LIDDELL-GRAINER and the HON. MISS DIANA ALESOPP, Ayton Castle, Berwickshire, for Mida, brown mare, born in 1923, bred by Lady Muriel Liddell-Granger; s. Billidère.
 498 III. (£5).—JOHN C. BOON, Lenton House, Lenton, Nottingham, for Betty, chestnut mare, born in 1919.
 495 IV. (£3).—MRS. PHILIP FLEMING, Grendon Hall, Grendon-Underwood, Bucks, for Mamory, grey gelding, born in 1922.
 492 R. N.—CAPT. H. A. BELLVILLE, Tedstone Court, Bromyard, for The Shah.

¹ Gold Challenge Cup, given by gentlemen interested in Hunters, for the best Mare or Gelding.

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Class 66.—Hack Mares or Geldings, over 15 hands.

- 419 I. (£15, & Champion.)—W. CONNOLLY, Lowndes Arms, Whaddon, Bletchley, for Ballina, bay gelding, born in 1922.
 440 II. (£10.)—W. J. SMITH, LTD., 21 Little Cadogan Place, London, S.W.1, for Cadogan Hector, chestnut gelding, born in 1922.
 411 III. (£5.)—W. B. BROWN, Southolme, Slingsby, Yorks, for Home Proud, chestnut mare, born in 1924; s. Dunholm, d. Proud Mary by Proudridge.
 477 IV. (£3.)—J. KENNETH STEVENSON, The Chase, Upper Welland, Malvern, for Red Cherry, chestnut gelding, born in 1923.
 497 E. N.—MRS. PHILIP FLEMING, Grendon Hall, Grendon-Underwood, Bucks, for Dabchick.

Class 67.—Hack Mares or Geldings. Suitable to carry a lady and to be ridden by a lady side-saddle.

- 440 I. (£15, & R. N. for Champion.)—W. J. SMITH, LTD., for Cadogan Hector. (See Class 66.)
 419 II. (£10.)—W. CONNOLLY, for Ballina. (See Class 66.)
 497 III. (£5.)—MRS. PHILIP FLEMING, Grendon Hall, Grendon-Underwood, Bucks, for Dabchick, brown gelding, born in 1921.
 477 IV. (£3.)—J. KENNETH STEVENSON, for Red Cherry. (See Class 66.)
 H. C.—439. C.—501.

CHILDREN'S PONIES.

Class 68.—Pony Mares or Geldings, not exceeding 13 hands, to be ridden by a child, born in or after 1918.

- 522 I. (£10.)—MRS. GEORGE PAYNTER, Eaton Grange, Grantham, for Celtic Brilliance, bay mare, born in 1922.
 519 II. (£5.)—MRS. C. PACEY, Burbage Hall, Hinckley, for Rhew, dark grey mare, born in 1923.
 518 III. (£3.)—MRS. C. PACEY, for Mickie, grey gelding, born in 1919.
 517 R. N.—MISS ROSALIND M. MOUNTAIN, The Grange, Habrough, Lincs, for Princess.
 H. C.—513.

Class 69.—Pony Mares or Geldings, over 13 and not exceeding 14 hands, to be ridden by a child born in or after 1915.

- 525 I. (£10.)—PERCY BRADLEY, Barrow House, Oakham, for Columbine, chestnut mare, born in 1919.
 529 II. (£5.)—PETER HOY, Holland Hall, Melbourn, Royston, for Tantivity, dark brown gelding, born in 1920.
 528 III. (£3.)—R. G. HOBBS, Wayside, Melton Mowbray, for Lady Marvel, grey mare, aged.
 530 R. N.—MISS BETTY LANGSTON, Furnivalls, Amersham, for Who's Who.
 H. C.—526.

Class 70.—Pony Mares or Geldings, over 14 and not exceeding 15 hands, to be ridden by a child, born in or after 1912.

- 505 I. (£10.)—THE DOWAGER LADY PENRYN, for Susannah. (See Class 65.)
 504 II. (£5.)—MRS. C. PACEY, Burbage Hall, Hinckley, for Babette, bay mare, born in 1921.
 495 III. (£3.)—MRS. PHILIP FLEMING, for Memory. (See Class 65.)
 542 R. N.—ARCHIE E. MOSS, Loughborough, for Climax 2nd.
 H. C.—540.

Driving Classes.²

SINGLE HARNESS.

Class 71.—Harness Mares or Geldings (Novice), not exceeding 14 hands.

- 577 I. (£15.)—J. C. JACKSON, Heathfield Cottage, Far Headingley, Leeds, for Fusion, bay gelding, born in 1925, bred by Mrs. Sofer Whitburn, Ampoft St. Mary, Andover; s. Braishfield Fuse 13587, d. 23909 Colne Marvel by Gentleman John 3624.
 546 II. (£10.)—WILLIAM HEATH, Sydney House, Crewe, for 26379 La La Success, bay mare, born in 1924, bred by W. M. Killick, Hankelow Court, Nantwich; s. Southworth Swell 11219, d. 24541 La La Melbourne by Royal Success 8995.
 554 III. (£5.)—ALEXANDER G. SHELL, Junior Carlton Club, Pall Mall, London, S.W.1, for Valentino, bay gelding, born in 1923, bred by John Brearley, West Didsbury, Manchester; s. Southworth Swell 11219 d. 19126 Goodmanham Lady by Polonius 4931.
 571 IV. (£3.)—J. UNDERWOOD 590 Mansfield Road, Sherwood, Notts, for 26541 Danethorpe Carnation, bay mare, born in 1925; s. Southworth Swell 11219, d. 25365 Pondfield Magic Torch by Torchfire 9472.
 549 R. N.—MRS. EDGAR HENRIQUES, Fernholm, Hesketh Park, Southport, for Vortex.
 H. C.—557.

¹ Silver Challenge Cup, given by a Member of the R.A.S.E. for the best Hack.

² Prizes given by the Nottingham Local Committee.

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Class 72.—Harness Mares or Geldings (Novice), over 14 and not exceeding 15 hands.

- 575 I. (£15, & Champion.)—FRANK W. BUTTLE, Kirkholme, Deepdale Avenue, Scarborough, for 26140 Glenavon Debutante, bay mare, born in 1923, bred by Enoch Glen, Kalm Park, Bathgate; s. Ophellus 13344, d. 23982 Heathwood Caprice by Westfield Polonius 9968.
 572 II. (£10, & R. N. for Champion.)—J. PARTINGTON, Ashley View, Marleet, Hull, for 25935 Ashley Lady Campion, bay mare, born in 1922; s. Bertrano 18288, d. 19253 Lady Campion by Mathias 6473.
 547 III. (£5.)—WILLIAM HEATH, Sydney House, Crews, for 26333 Norrie, black-brown mare, born in 1922, bred by Robert Scott, Thornhome, Carlisle; s. Flash Mathias 11426, d. 12987 Norah Garton by Garton Duke of Connaught 3009.
 561 IV. (£3.)—MRS. C. HARTLEY BATT, Wood Edge, Shiplake-on-Thames, Oxon, for 26176 Lady Landon, brown mare, born in 1923, bred by W. M. Killick, Hanelow Court, Nantwich; s. Buckley Courage 13771, d. 24541 La La Melbourne by Royal Success 8995.

Class 73.—Harness Mares or Geldings (Novice), over 15 hands.

- 573 I. (£15.)—ROBERT BLACK, The Grove, Osbaldwick, York, for G 503 Montrose, bay gelding, born in 1923, bred by Benjamin Oakes, Constitutional Club, London, W.C.; s. Highland Dew 13773, d. 19251 Lady Alicia by Sir Augustus 6562.
 564 II. (£10.)—W. S. MILLER, Balmanno Castle, Bridge of Earn, for G 568 Knight of the Garter, black gelding, born in 1924, bred by Enoch Glen, Kalm Park, Bathgate; s. Bertrano 18288, d. 23567 Glenavon Pearl by Mathias 6473.
 552 III. (£5.)—MRS. EDGAR HENRIQUES, Fernholm, Hesketh Park, Southport, for G 541 Fleetwood Crusader, bay gelding, born in 1923, bred by the late O. F. Kenyon, Steele, Whitechurch, Salop; s. Buckley Courage 13771, d. 25010 Hallow Starlight by Antonius 10559.
 558 IV. (£3.)—FRANK C. MINOPRIO, Avening Court, Avening, Glos., for G 651 Warwick Malvolio, bay gelding, born in 1922, bred by E. O. Boston, Wyde Green, Birmingham; s. Haydon's King Rufus 12860, d. 20266 Suffragette by Garton Duke of Connaught 3009.
 576 R. N.—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Leopardess.

Class 74.—Harness Mares or Geldings, not exceeding 13.2 hands.

- 567 I. (£15.)—W. S. MILLER, Balmanno Castle, Bridge of Earn, for G 625 Jix, bay gelding, born in 1924, bred by Mrs. Paget-Stevenson, Hurworth-on-Tees; s. Southworth Swell 11219, d. 22249 Talke Duchess by Talke Fire King 9932.
 549 II. (£10.)—MRS. EDGAR HENRIQUES, Fernholm, Hesketh Park, Southport, for Vortex, bay gelding, born in 1921, bred by James S. Hepburn, Taffs Farm, Nuneaton; s. Melbourne Shot 13055, d. 24317 Minnie Melbourne by Squire Melbourne 12167.
 557 III. (£5.)—MRS. T. W. GEORGE, Brooklyn Pony Stud, 17 Sherlock Street, Birmingham, for Donnybrook Little Fuse 14043, dark bay gelding, born in 1921, bred by Dr. Hedley Tomlinson, The Cottage, Handsworth Wood, Birmingham; s. Fusee 12626, d. 25326 True Token by Tissington Gideon 9042.

Class 75.—Harness Mares or Geldings, over 13.2 and not exceeding 14 hands.

- 568 I. (£15.)—W. S. MILLER, Balmanno Castle, Bridge of Earn, for G 556 Fuse Junior, brown gelding, born in 1924; s. Braishfield Fuse 13567, d. 25150 Buckley Poppy by Little Briton 11813.
 553 II. (£10.)—MRS. EDGAR HENRIQUES, Fernholm, Hesketh Park, Southport, for G 265 Cestrian Furious, brown gelding, born in 1917, bred by G. T. Shield, Burnopfield, Durham; s. Sir Ivor 12737 by Torchfire.
 554 III. (£5.)—ALEXANDER G. SHIELL, for Valentino. (See Class 71.)
 546 IV. (£3.)—WILLIAM HEATH, for La La Success. (See Class 71.)
 580 R. N.—S. E. MOSS, St. Fabian's Drive, Chelmsford, for Hahrough Princess.

Class 76.—Harness Mares or Geldings, over 14 and not exceeding 15 hands.

- 569 I. (£15, & Champion.)—W. S. MILLER, Balmanno Castle, Bridge of Earn, for G 333 Knight Bachelor, brown gelding, born in 1922, bred by Enoch Glen, Kalm Park, Bathgate; s. Ophellus 13344, d. 22171 Pallas Athene by Mathias 6473.
 575 II. (£10.)—FRANK W. BUTTLE, for Glenavon Debutante. (See Class 72.)
 572 III. (£5.)—J. PARTINGTON, for Ashley Lady Campion. (See Class 72.)
 561 IV. (£3.)—MRS. C. HARTLEY BATT, for Lady Landon. (See Class 72.)
 547 R. N.—WILLIAM HEATH, for Norrie. (See Class 72.)
 H. C.—581.

Class 77.—Harness Mares or Geldings, over 15 and not exceeding 15.2 hands.

- 564 I. (£15.)—W. S. MILLER, for Knight of the Garter. (See Class 73.)
 573 II. (£10.)—ROBERT BLACK, for Montrose. (See Class 73.)
 552 III. (£5.)—MRS. EDGAR HENRIQUES, for Fleetwood Crusader. (See Class 73.)
 558 IV. (£3.)—FRANK C. MINOPRIO, for Warwick Malvolio. (See Class 73.)

¹ Gold Challenge Cup, given by a Member of the Hackney Horse Society, for the best animal in the Novice Classes.

² The "Glasgow" Gold Challenge Cup, given by a Member of the R.A.S.E., for the best animal in Classes 74 to 78.

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Class 78.—*Harness Mares or Geldings, over 15.2 hands.*

- 574 I. (£15, & R. N. for Champion.)—ROBERT BLACK, The Grove, Osbaldwick, York, for G 496 Field Adjutant, bay gelding, born in 1921, bred by Miss R. B. Babcock, Shawlands, Lingfield; s. Danum Grand Fashion 13588, d. 21876 Blanca by Leopard 9783.
- 582 II. (£10.)—THEO. HIGNETT, St. Ives, Sandfield Park, West Derby, Liverpool, for G 190 Kentmere King, bay gelding, born in 1915, bred by J. Harold Wright, Morton, Bingley; s. Mathias 6473, d. 16122 Queen of Newton by Royal Danegelt 5785.
- 584 III. (£5.)—THEO. HIGNETT, for G 354 Lord Jessamine, bay gelding, born in 1918, bred by the late Robert Scott, Thornhome, Carlisle; s. Mathias 7473, d. 11519 Sweet Jessamine by Robert Ellesmere 2659.
- 587 IV. (£3.)—THEO. HIGNETT, for G 347 Setton Courtier, bay gelding, born in 1921, bred by Enoch Glen, Kaim Park, Bathgate; s. Ophellus 13344, d. 24943 Oakington Ring-o'-Bell by Antonius 10559.
- 580 R. N.—FRANK C. MINOPRIO, Avening Court, Avening, Glos, for Netherall Bonny Boy.

DOUBLE HARNESS.

Class 79.—*Harness Mares or Geldings.*

- 569 & 570 I. (£15.)—W. S. MILLER, for Knight Bachelor (see Class 76), and 24479 Danum Woodbine, brown mare, born in 1916; s. Mathias 6473, d. 22007 Galway by Sir Augustus 6562.
- 582 & 584 II. (£10.)—THEO. HIGNETT, for Kentmere King and Lord Jessamine. (See Class 78.)
- 585 & 587 III. (£5.)—THEO. HIGNETT, for G 279 Setton Cavalier, bay gelding, born in 1920, bred by the late Joseph Morton, Stow, Downham Market; s. St. Adrian 13090, d. 24150 Alleyne by Beckingham Squire 8070; and Setton Courtier. (See Class 78.)
- 580 & 581 IV. (£3.)—S. E. MOSS, St. Fabian's Drive, Chelmsford, for 25732 Habrough Princess, bay mare, born in 1921, bred by J. E. Rushworth, Eskdale, Bargate, Grimsby; s. Southworth Swell 11219, d. 23622 Holland Hespera by Southworth Swell 11219; and Braishfield Juniper 14103, bay gelding, born in 1921, bred by Mrs. A. C. King, Braishfield Manor, Romsey; s. Royal Success 8995, d. 21860 Beckingham Lady Crichton by Admiral Crichton 9578.

TANDEM.

Class 80.—*Harness Mares or Geldings.*

- 582 & 584 I. (£15.)—THEO. HIGNETT, for Kentmere King and Lord Jessamine. (See Class 78.)
- 580 & 581 II. (£10.)—S. E. MOSS, for Habrough Princess and Braishfield Juniper. (See Class 79.)

CATTLE.

Shorthorns.

Class 83.—*Shorthorn Bulls, born in or before 1925.*

- 654 I. (£15, Champion,¹ Champion,² and Champion,³)—ROBERT L. P. DUNCAN, Pitpointie, Auchterhouse, Forfarshire, for Balcarn Royal Standard 204894, dark roan, born Dec. 9, 1925, bred by F. L. Wallace, Balcarn, Oldmeldrum, Aberdeenshire; s. Calrossie Ramsden Monarch 188134, d. 8759 Balcarn Royalty by Edgcote Martial Law 125388.
- 662 II. (£10.)—ALBERT JAMES MARSHALL, Bridgebank, Stranraer, for Beaufort Royal Prince 196232, white, born March 21, 1924, bred by General Lord Lovat, Beaufort Castle, Beaulieu; s. Lawhill Scottish King 173816, d. 27945 Naemoor Princess Royal by Edgcote Masterpiece 115277.
- 656 III. (£5.)—C. E. GUNTHER, Tongswood, Hawkhurst, Kent, for Cluny Golden Charm 197489, red roan, born March 7, 1924, bred by Lady Cathcart, Cluny Castle, Aberdeenshire; s. Cluny Regal Star 154879, d. 5430 Cudham Broadhooks 4th by Golden Charm 188750.
- 657 IV. (£4.)—JOSEPH HARRIS, Brackenburgh Tower, Carlisle, for Oxford Duke of Calthwaite 100th 201491, dark roan, born Dec. 18, 1924; s. Pride of Belmont 192977, d. 13722 Oxford Duchess of Calthwaite 97th by Gainford Grand Duke 125637.
- 663 V. (£3.)—LORD MERTREY, Hean Castle, Saundersfoot, Pembrokeshire, for Hean Arthur 190428, red, born May 6, 1923; s. Balcarn Leader 153580, d. 5719 Hean Augusta Fyvie 2nd by Hean Cardigan 142868.
- 653 R. N.—SIR RICHARD A. COOPER, BART., Billington, Leighton Buzzard, for Millhills Clipper King.
E. C.—661. C.—660.

¹ The "Glasgow" Gold Challenge Cup, given by a Member of the R.A.S.E., for the best animal in Classes 74 to 78.

² Champion Prize of £20, given by the Shorthorn Society, for the best Bull. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Bull.

³ Silver Challenge Cup, given by the Argentine Shorthorn Breeders' Association, for the best Bull.

⁴ The "Brothers Colling" Memorial Perpetual Challenge Cup, given through the Durham Agricultural Committee, for the best Shorthorn.

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Class 84.—*Shorthorn Bulls, born on or between January 1 and March 31, 1926.*¹

- 665 I. (£15).—ALEXANDER & ADDIE, Newbiggin, Cambus, Stirling, for Collynie Red King 214704, red, born Jan. 31, bred by Duthie Webster, Collynie, Tarves, Aberdeenshire; s. King William 173110, d. 22597 Lutwyche Crocus by Cluny Mintmaster 147996.
 668 II. (£10).—LADY LEON, Bletchley Park, Bletchley, for Bletchley Clipper King 213624, roan, born Jan. 10, bred by the late Sir Herbert Leon, Bart., Bletchley Park; s. King's Messenger 173092, d. 51502 Clipper Lady by Balcairn Royal Diamond 160692.
 666 III. (£5).—L. V. GARLAND, Greenbank, The Towns, Hayle, Cornwall, for Climsland Clipper King 214534, roan, born Jan. 19, bred by H.E.H. The Duke of Cornwall, K.G., Marsh Farm, Landulph, Cornwall; s. Climsland Regal King 2nd 197380, d. 36146 Dalcapon Clipper by Queen's Guard 186197.
 667 R. N.—A. L. JESSOPP, Lexham Hall, King's Lynn, for Lexham Baron.

Class 85.—*Shorthorn Bulls, born on or between April 1 and December 31, 1926.*

- 676 I. (£15).—ALBERT JAMES MARSHALL, Bridgebank, Stranraer, for Rosehaugh Bootlegger 218733, red, born May 4, bred by Mrs. Fletcher, Rosehaugh, Avoch; s. Notlaw Luck 138276, d. 48683 Rosehaugh Flora 7th by The Last Baron 157072.
 669 II. (£10).—H.R.H. THE PRINCE OF WALES, K.G., Grove Farm, Lenton, Nottingham, for Climsland Ramsden Monarch 2nd 214544, red, born Aug. 4; s. Collynie Carnival 188637, d. 18090 Maid of Promise 15th by Norseman of Harviestoun 150829.
 673 III. (£5).—NORMAN N. LEE, Stonelands, Arncliffe, Skipton-in-Craven, for Collynie Red Eagle 214703, red, born May 3, bred by Duthie Webster, Collynie, Tarves, Aberdeenshire; s. Calrossie Augusta Monarch 179178, d. 20909 Windmill Lady Mabel by Lord Mayor 132036.
 678 IV. (£4).—J. ROBINSON & SON, The Green, Wetherall, Carlisle, for Ensign 215394, roan, born May 20, bred by W. Munro, Moness, Abertfeldy; s. Larbert Prince 200244, d. Emma 45th by Collynie Chancellor 119543.
 675, 688, 726 R. N. for Specials.—ALBERT JAMES MARSHALL, for Bridgebank Roan Robin, Bridgebank Vulcan, and Bridgebank Bruyn.

Class 86.—*Shorthorn Bulls, born on or between January 1 and March 31, 1927.*¹

- 688 I. (£15, R. N. for Champion, "R. N. for Champion," & R. N. for Champion).—ALBERT JAMES MARSHALL, Bridgebank, Stranraer, for Bridgebank Vulcan, roan, born Jan. 10; s. Bridgebank Annum 187694, d. 39759 Virtue by Balcairn Baronet 153566.
 687 II. (£10).—CAPT. JOHN MACGILLIVRAY, Calrossie, Nigg, Ross-shire, for Calrossie Cease Fire, roan, born Feb. 10; s. White Prince 168014, d. 51852 Calrossie Clipper Mary by Doune Monarch 155390.
 681 III. (£5).—ALEXANDER & ADDIE and P. & G. HUGHES, Newbiggin, Cambus, Stirling, for Sanquhar Sorcerer, roan, born Feb. 8, bred by Messrs. Law, Mains of Sanquhar, Forres; s. Sanquhar Gay Festoon 202618, d. 38868 Sanquhar Goldie 6th by Clipper Favourite 147952.
 685 IV. (£4).—SIR CECIL CHUBB, BART., Bapton Manor, Codford, Wilts, for Bapton Snowdrift, white, born March 6; s. Roan Robin 202241, d. Celandine (Vol. 64, p. 1389) by Edgote Courrier 130818.
 680 V. (£3).—H.R.H. THE PRINCE OF WALES, K.G., Grove Farm, Lenton, Nottingham, for Royal Lavender 3rd, roan, born Feb. 23; s. Collynie Carnival 188637, d. 60738 Lavender Lady by Cluny Crown Augustus 170395.
 680 R. N.—C. W. DRABBLE, Colville Cottage, Cudham, Kent, for Cudham Rufus.
 H. C.—684. C.—688.
 687, 704, 749 Special I. £5.—CAPT. JOHN MACGILLIVRAY, for Calrossie Cease Fire, Calrossie Officer Commanding, and Calrossie Flossie Belle.
 685, 741, 757 Special II. £10.—SIR CECIL CHUBB, BART., for Bapton Snowdrift, Bapton Kilblean Beauty, and Bapton Crocus 6th.

Class 87.—*Shorthorn Bulls, born on or between April 1 and June 30, 1927.*

- 704 I. (£15).—CAPT. JOHN MACGILLIVRAY, Calrossie, Nigg, Ross-shire, for Calrossie Officer Commanding, dark roan, born June 2; s. Brulach Royal Broadhooks 205637, d. 51847 Calrossie Augusta 112th by Doune Monarch 155390.
 699 II. (£10).—ROBERT L. P. DUNNAN, Pitpointie, Auchterhouse, Forfarshire, for Benedictine, red, born April 6, bred by Hugh McLennan Duncan, Lethenty, Alford, Aberdeenshire; s. Mechanic 189051, d. 48041 Beauty 9th by Millhills Kingmaker 174126.
 697 III. (£5).—MISS A. SYLVIA BROCKLEBANK, O.B.E., Wing Grange, Oakham, for Wing Norman, red roan, born May 29; s. Balcairn Golden Monarch 186906, d. 46218 Wing Julia by Mike 157751.
 706 IV. (£4).—ALBERT JAMES MARSHALL, Bridgebank, Stranraer, for Balcairn Celt, roan, born April 12, bred by F. L. Wallace, Balcairn, Oldmeldrum; s. Calrossie Ramsden Monarch 188134, d. 19191 Balcairn Charity by Edgote Martial Law 125388.

¹ Prizes, except Fourth and Fifth, given by the Shorthorn Society.

² Special Prizes of £15 First Prize, and £10 Second Prize, given by the Shorthorn Society, for the best groups of three animals bred by Exhibitor.

³ Champion Prize of £20, given by the Shorthorn Society, for the best Bull. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Bull.

⁴ Silver Challenge Cup, given by the Argentine Shorthorn Breeders' Association, for the best Bull.

⁵ The "Brothers Colling" Memorial Perpetual Challenge Cup, given through the Durham Agricultural Committee, for the best Shorthorn.

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- 709 V. (23).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, Herts, for Basiloon Crystal, red roan, born April 21; s. Quartermaster 132925, d. 40693 Charity 30th by Fairlawne Air Raid 148740.
702 E. N.—J. and R. HARRISON, Gainford Hall, Gainford, S.O., Co. Durham, for Sanquhar Romance.
H. C.—693, 708. C.—692, 715.

Class 88.—*Shorthorn Bulls, born on or between July 1 and December 31, 1927.*¹

- 726 I. (215).—ALBERT JAMES MARSHALL, Bridgebank, Stranraer, for Bridgebank Bruyn, red, born July 23; s. Lutwyche Challenger 191796, d. 64829 Tissue Butterfly by Collynie Sunrise 148047.
719 II. (210).—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, for Climsland Sun Ray 222081, roan, Aug. 15; s. Climsland Golden Ray 197372, d. 1813 Lutwyche Princess Royal by Hindley Bridgroom 131487.
717 III. (25).—H.R.H. THE PRINCE OF WALES, K.G., for Climsland Gold Mint 222076, red roan, born Aug. 29; s. Climsland Golden Ray 197372, d. Cluny Eliza 10th by President of the Mint 109670.
725 IV. (24).—LADY LEON, Bletchley Park, Bletchley, for Bletchley Fashion, red, born July 10; s. Calrossie Royal Guard 208519, d. Susanne (Vol. 63, p. 962) by Collynie Golden Flash 115946.
716 V. (23).—H.R.H. THE PRINCE OF WALES, K.G., Grove Farm, Lenton, Nottingham, for Lenton Royal Knight, roan, born July 2; s. Collynie Carnival 188637, d. 57526 Roan Millicent by Littleton Royal 173496.
720 R. N.—ALEXANDER & ADDIE, Newbiggin, Cambus, Stirling, for Cambus Harry.
H. C.—722. C.—723.

Class 89.—*Shorthorn Cows (in-milk), born in or before 1924.*

- 733 I. (215, & R. N. for Champion).—LADY LEON, Bletchley Park, Bletchley, for 51506 Vanity, roan, born Feb. 3, 1923, calved March 1, 1923, bred by the late Sir Herbert Leon, Bart., Bletchley Park; s. Balcairn Royal Diamond 180962, d. Vanity Fair by Prince Rudolph 117072.
735 II. (210).—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent, for 68881 Godinton Groat 9th, roan, born March 2, 1924, calved May 14, 1928; s. Godinton Golden Autumn 171953, d. 8792 Dewlap 14th by Blislington Vanguard 129670.
730 III. (25).—FRED ALLISON, Lilac Farm, Yedingham, Heslerton, Malton, for 45103 Yedingham Mina 2nd, dark roan, born Feb. 25, 1923, calved May 26, 1928; s. Allerston Standard 180698, d. 9755 Yedingham Mina by Doune Asterisk 130653.
731 R. N.—JOSEPH HARRIS, Brackenburgh Tower, Carlisle, for Oxford Duchess of Calthwaite 111th.
H. C.—732. C.—734.

Class 90.—*Shorthorn Heifers (in-milk), born in 1925.*

- 737 I. (215).—J. and R. HARRISON, Gainford Hall, Gainford S.O., Co. Durham, for 81214 Prestwick Maud, red, born March 18, calved April 20, 1928, bred by William White, Prestwick Hall, Ponteland, Northumberland; s. Balcairn Advocate 158564, d. 8487 Rosa by Master Key 137896.

Class 91.—*Shorthorn Heifers, born in 1926.*

- 741 I. (215).—SIR CREIL CHUBB, BART., Bapton Manor, Codford, Wilts, for 83789 Bapton Kilblean Beauty, roan, born April 11; s. Godinton Grand Duke 163580, d. 32018 Mistletoe by Billington Snowstorm 154027.
753 II. (210).—SIR GEORGE ALFRED WILLS, BART., Langford Court Farm, Langford, Bristol, for 92918 Rickford Butterfly 7th, white, born May 5; s. Collynie Royal Regent 148043, d. Rickford Butterfly by Golden Guardsman 125756.
746 III. (25).—CAPT. JOHN MACGILLIVRAY, Calrossie, Nigg, Ross-shire, for 88008 Calrossie Flossie Belle, roan, born March 29; s. White Prince 168014, d. 51855 Calrossie Flossie Phyllis by Doune Monarch 155390.
749 IV. (24).—COL. FAIRFAX RODES, Brockhampton Park, Andoversford, Cheltenham, for 90244 Cotchay Broadhooks 9th, white, born March 11; s. Farnhill Ideal 189630, d. 17392 Cotchay Broadhooks 4th by Notlaw Noel 144258.
744 V. (23).—AUGUSTUS LEVERTON JESSOP, Lexham Hall, King's Lynn, for 84476 Latton Missie 36th, red, born July 20, bred by Capt. Sydney Dennis, Down Ampney House, Cricklade, Wilts; s. Latton Fame 191356, d. Latton Missie 14th by Fairlawne Goldsmith 125460.
738 R. N.—MAJOR CLIVE BEHRENS, Swinton Grange, Malton, for Swinton Maid Ramsden 13th.
H. C.—747. C.—740.

Class 92.—*Shorthorn Heifers, born on or between January 1 and March 31, 1927.*

- 757 I. (215).—SIR CREIL CHUBB, BART., Bapton Manor, Codford, Wilts, for Bapton Crocus 6th, white, born Feb. 18; s. Roan Robin 202241, d. 32005 Cyclamen by Bapton Malcolm 134909.
763 II. (210).—RALPH W. JORGENSEN, The Berry Farm, South Cerney, Gloucester, for Crowthorn Butterfly 2nd, red, born Jan. 8; s. Balcairn Rearguard 189920, d. 65017 Hoan Butterfly 7th by Hean Ashbourne 181521.

¹ Prizes, except Fourth and Fifth, given by the Shorthorn Society.

² Champion Prize of £20, given by the Shorthorn Society, for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Cow or Heifer.

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- 762 III. (25).—J. and R. HARRISON, Gainford Hall, Gainford S.O., Co. Durham, for Gainford Meg Merrilees, dark roan, born Feb. 9; s. Collynie Matchmaker 162343, d. 27990 Broom Meg Merrilees 2nd by Dune Graduate 155385.
- 754 IV. (24).—HIS MAJESTY THE KING, The Royal Farms, Windsor, for Goldie 68th, white, born Feb. 9, bred by George Walker, Tillygrelg, Aberdeenshire; s. Clipper Marshal 188527, d. 47313 Goldie 61st by Collynie First President 162340.
- 760 V. (23).—SIR BERNARD GREENWELL, BART., Marden Park, Woldingham, Surrey, for Marden Nonpareil, dark roan, born Jan. 9; s. Collynie Viceroy 188660, d. 39581 Cudham Nonpareil 4th by Cudham Dane 162578.
- 756 R. N.—HUGH BAKER, Chedglow, Malmesbury, for Rose of Chedglow 82nd.
H. C.—759. C.—764.

Class 93.—Shorthorn Heifers, born on or between April 1 and December 31, 1927.

- 779 I. (215, & Champion.)—SIR GEORGE ALFRED WILLS, BART., Langford Court Farm, Langford, Bristol, for Rickford Midge Ramsden, roan, born April 5; s. Cudham Prospect 206506, d. 69550 Rickford Lady Ramsden by Collynie Rubicon 179695.
- 772 II. (210).—ARTHUR GREEN, Denton, Ilkley, Yorks, for Denton Keepsake, roan, born May 21; s. Collynie Golden Key 170456, d. 7481 Golden Drop 17th by Quartermaster 132925.
- 771 III. (23).—SIR CECIL CHUBB, BART., Bapton Manor, Codford, Wilts, for Bapton Kilblean Beauty 5th, roan, born June 7; s. Roan Robin 202241, d. 19748 Mignonette by Boquhan Stamp 147020.
- 769 IV. (24).—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, for Climsland Orange Blossom 6th, roan, born April 14; s. Oulcairn Prince Charming 197792, d. Orange Blossom 48th (Vol. 64, p. 870) by Mesmerist 121570.
- 773 V. (23).—SIR BERNARD GREENWELL, BART., Marden Park, Woldingham, Surrey, for Marden Clara 20th, light roan, born July 4; s. Rothiebrilsbane Metaphor 193686, d. 49336 Marden Clara 13th by Balcairn Clansman 168678.
- 767 R. N.—HIS MAJESTY THE KING, The Royal Farms, Windsor, for Glany Lady Eliza 6th.
H. C.—776. C.—770, 778.

Herefords.

Class 94.—Hereford Bulls, born on or before August 31, 1925.

- 784 I. (215, Champion, & Champion.)—SIR DAVID R. LEWELLYN, BART., The Court, St. Fagans, Cardiff, for St. Fagans Paxolite, born April 1, 1925; s. Resolute 35537, d. Peace (Vol. 50, p. 556) by Subaltern 35654.
- 783 II. (210).—D. G. P. JEFFREYS, Neuadd, Treacastle, Breconshire, for Energetic 44813, born Dec. 17, 1923, bred by D. Jenkins, Boverton Place, Llantwit Major, Cardiff; s. Energy 40898, d. Beauty by Saladin 81957.
- 785 III. (25).—J. L. M. SINNETT, Charlton Hill, Wroxeter, Shrewsbury, for Bounds Novice 43376, born Feb. 4, 1923, bred by H. Weston & Sons, The Bounds, Much Marcle, Herefordshire; s. Aldersand Lictor 38467, d. British Beauty 2nd by Conquest 82393.

Class 95.—Hereford Bulls, born on or between September 1, 1925, and August 31, 1926.

- 788 I. (215).—W. G. BUCHANAN, Manor House Farm, Abergavenny, for Gobion Resolute 2nd 48210, born Sept. 12, 1925; s. Gobion Resolute 46010, d. Gobion Freedom 3rd by Fyons Volunteer 39860.
- 790 II. (210).—CAPT. R. T. HINKES, Mansel Court, Hereford, for Mansel Sunstar 48373, born Oct. 22, 1925; s. Priory Hillman 44082, d. Mansel Spangle 2nd by Eyton Horace 84035.
- 786 III. (25).—DAVID PERCYAL BARNETT, Walterston, Llancarfan, Cardiff, for Samlute 47573, born Dec. 15, 1925; s. Resolute 35537, d. Hillston Rosary by Sir Sam 33181.
- 791 R. N.—EDWARD WEBB & SONS (STOURBRIDGE), LTD., Astwood Farm, Stoke Works, Stourbridge, for Astwood Corporal.

Class 96.—Hereford Bulls, born on or between September 1 and November 30, 1926.

- 798 I. (215).—ERNEST STEVENS, Chapel Farm, Rimley Castle, Pershore, for Pershore Marvel 48490, born Sept. 25; s. Rose Showman 89935, d. Ladybird 5th by Eaton Columbus 36620.
- 799 II. (210).—H. WESTON & SONS, The Bounds, Much Marcle, Herefordshire, for Bounds Robinhood 47918, born Sept. 11; s. Leen Sergeant 43887, d. Princess 6th by Bounds Justice 36106.
- 797 III. (25).—WILLIAM SMYTH, The Leen, Pembroke, for Leen Trombone, born Nov. 29; s. Vern Bendigo 45513, d. Leen Tenor (Vol. 55, p. 584) by Concord 36419.

* Champion Prize of £20, given by the Shorthorn Society, for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Cow or Heifer.

* Champion Prize of £10 10s., given by the Hereford Herd Book Society, for the best Bull. * Perpetual Silver Challenge Trophy, given through the Hereford Herd Book Society for the best Bull.

* Prizes given by the Hereford Herd Book Society.

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795 R. N.—J. PRYCE & SONS, Penmaes, Talygarth, Breconshire, for Penmaes Surprise.
G.—792.

Class 97.—Hereford Bulls, born on or between December 1, 1926, and February 28, 1927.

- 809 I. (£15, R. N. for Champion.¹ & R. N. for Champion.)—ERNEST STEVENS, Chapel Farm, Elmley Castle, Pershore, for Pershore Juice 48487, born Dec. 31, 1926; s. Rose Showman 39935, d. Orange 18th by Emperor 39082.
810 II. (£10.)—JOHN WALKER, Knightwick Manor, Worcester, for Knightwick Phoenix, born Dec. 11, 1926; s. Defence 38981, d. Knightwick Pewit (Vol. 57, p. 524) by Eaton Hotspur 38631.
800 III. (£5.)—H. J. DENT, Perton Court, Stoke Edith, Hereford, for Perton Jumbo, born Dec. 6, 1926; s. Percentage 37655, d. Lively 45th (Vol. 56, p. 243) by Sunclad 28762.
811 IV. (£4.)—ARTHUR R. YBOMANS, Aston House, Stevenage, for Sunrise 43673, born Dec. 13, 1926, bred by W. H. D. Davies, Pigeon House, Weston Beggard, Hereford; s. Dinam Magnet 45849, d. Purity 6th by Sapper 35591.
804 V. (£3.)—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, Cardiff, for St. Fagans Pandarus, born Jan. 26, 1927; s. Priory Norseman 46340, d. Pansy of Pitsford 2nd (Vol. 54, p. 268) by Prince of Pitsford 41499.
808 R. N.—SIR MAURICE LEVY, BART., Great Glen House, Leicester, for Glen Highness.
H. C.—806. C.—801.

Class 98.—Hereford Bulls, born on or after March 1, 1927.

- 814 I. (£15.)—H. J. DENT, Perton Court, Stoke Edith, Hereford, for Perton Jim, born April 11, 1927; s. Percentage 37655, d. Curly 71st (Vol. 54, p. 275) by Mansel Hopeful 35281.
813 II. (£10.)—PERCY E. BRADSTOCK, Free Town, Tarrington, Herefordshire, for Free Town Reliable 48169, born April 2, 1927; s. Bindle 45655, d. Pearl 2nd by Aldersend Napier 35844.
812 III. (£5.)—HIS MAJESTY THE KING, The Royal Farms, Windsor, for Windsor Ranger, born March 9, 1927; s. Aldersend Monarch 38469, d. Blue Bell (Vol. 55, p. 157) by Walterston Sam 38302.
820 IV. (£4.)—E. CRAIG TANNER, Eyton-on-Severn, Wroxeter, Salop, for Eyton Scout, born May 1, 1927; s. Priory Resolute 41505, d. Eyton Satire 13th (Vol. 56, p. 593) by Lion 32709.
817 R. N.—JAMES MEDHOOOT, Bodenham Court, Hereford, for Lawyer.
G.—816.

Class 99.—Hereford Cows or Heifers (in-milk), born on or before August 31, 1925.

- 824 I. (£15, & R. N. for Champion.)—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, Cardiff, for Priory Cornelia (Vol. 55, p. 187), born Dec. 30, 1920, calved Jan. 17, 1928, bred by L. Blakstad, The Priory, Clifford, Hereford; s. Resolute 35537, d. Cornelia by Leon Vistula 31664.
825 II. (£10.)—J. PRYCE & SONS, Penmaes, Talgarth, Breconshire, for Bridesmaid (Vol. 57, p. 450), born March 10, 1923, calved Dec. 20, 1927; s. Leen Marplot 37179, d. Penmaes Pride by Spartan 34344.
822 III. (£5.)—PERCY E. BRADSTOCK, Free Town, Tarrington, Herefordshire, for Free Town White Heather (Vol. 56, p. 181), born Jan. 14, 1925, calved Jan. 16, 1928; s. Free Town Reformer 43719, d. Heather by Time Test 26529.

Class 100.—Hereford Heifers, born on or between September 1, 1925, and August 31, 1926.

- 827 I. (£15, & Champion.)—DAVID PERCIVAL BARNETT, Walterston, Llancafarn, Cardiff, for Ladylute (Vol. 57, p. 158), born Jan. 20, 1926; s. Resolute 35537, d. Lady Bodicea by Sir Sam 33131.
826 II. (£10.)—HIS MAJESTY THE KING, The Royal Farms, Windsor, for Blue Bird 2nd (Vol. 57, p. 147), born March 22, 1926; s. Aldersend Conquest 44125, d. Blue Bird by Lulsley Statesman 37327.
828 III. (£5.)—CAPT F. B. F. BIBBY, Hardwicke Grange, Shrewsbury, for Olive Bluebell 4th (Vol. 57, p. 165), born Jan. 23, 1926; s. Eaton Gayboy 43645, d. Olive Bluebell 3rd by Shucknell Prince 33124.
829 R. N.—CAPT. F. B. F. BIBBY, for Olive Sparkle 10th.

Class 101.—Hereford Heifers, born on or between September 1 and November 30, 1926.⁴

- 833 I. (£15.)—CHARLES HENRY MORRIS, Weston Court, Pembridge, for Weston Destiny, born Sept. 15; s. Hilarious 44969, d. Weston Remembrance (Vol. 55, p. 459) by Weston Gamester 41784.

¹ Champion Prize of £10 10s., given by the Hereford Herd Book Society, for the best Bull.

² Perpetual Silver Challenge Trophy, given through the Hereford Herd Book Society, for the best Bull.

³ Champion Prize of £10 10s., given by the Hereford Herd Book Society, for the best Cow or Heifer.

⁴ Prizes given by the Hereford Herd Book Society.

- 831 II. (£10).—HIS MAJESTY THE KING, The Royal Farms, Windsor, for Windsor Evelyn, born Sept. 18; s. Aldersend Monarch 88469, d. Envy (Vol. 50, p. 1010) by Admiral Beatty 31222.
 832 III. (£5).—SIR MAURICE LEVY, BART., Great Glen House, Leicester, for Glen Hilda, born Sept. 27; s. Viceroy of Pitsford 43106, d. Glen Dignity (Vol. 54, p. 407) by Bounds Kyrle 38632.

Class 102.—Hereford Heifers, born on or after December 1, 1926.

- 843 I. (£15).—JOHN WALKER, Knightwick Manor, Worcester, for Knightwick Chloe, born Jan. 3, 1927; s. Defence 88981, d. Knightwick Chocolate (Vol. 56, p. 623) by Eaton Hotspur 38631.
 836 II. (£10).—W. H. B. CAVE, Wall End, Monkland, Leominster, for Gloria (Vol. 58, p. 182), born Jan. 29, 1927; s. Crossways Violetous 42178, d. Bonnie by Doctor 31419.
 840 III. (£5).—WILLIAM EVERALL, Shrawardine Castle, Shrewsbury, for Shraden Joan, born Dec. 5, 1926; s. Eytton Page 44828, d. Gem of Shrawardine (Vol. 52, p. 325) by Bounds Jumper 36105.
 842 IV. (£4).—E. CRAIG TANNER, Eytton-on-Severn, Wroxeter, Salop, for Eytton Dowager 21st, born Dec. 3, 1926; s. Orlando of Pitsford 42697, d. Eytton Dowager 7th (Vol. 54, p. 580) by Wormington Commodore 41834.
 839 R. N.—THE HON. MRS. DEVEREUX, Hampton Court, Leominster, for Hampton Court Gamester Girl.

Sussex.

Class 108.—Sussex Bulls, born in or before 1926.

- 845 I. (£15, Champion,¹ & Champion.²)—L. O. JOHNSON, Peppers, Ashurst, Steyning, Sussex, for Kings Barn Sunbright 6213, born Jan. 5, 1924; s. Sundridge 4578, d. Avisford Headless 3rd 19881 by Red Miller 4918.
 844 II. (£10).—COL. SIR G. L. COURTHOPE, BART., M.C., M.P., Whilgh, Wadhurst, Sussex, for Tiochurst King Twin 6557, born April 1, 1926, bred by William Ford, Singehurst, Tiochurst, Sussex; s. Boreham King 2nd 6130, d. Oakover Twin 13th 19576 by Mableton Lad 4326.

Class 109.—Sussex Bulls, born in 1927.

- 847 I. (£15, & R. N. for Champion,¹ & R. N. for Champion.²)—COL. SIR G. L. COURTHOPE, BART., M.C., M.P., Whilgh, Wadhurst, Sussex, for Whilgh Falstaff 6723, born Jan. 7; s. Coldharbour Headless Chevalier 6157, d. Whilgh Elder Flower 12th 21847 by Normanhurst Albert 4864.
 848 II. (£10).—EDWARD HURTLER, Crowborough Warren, Sussex, for Crowborough Warren Arab 1st 6778, born Jan. 16; s. Linton Arab 6115, d. Oakover Daisy 25th 22272 by Oakover Chevalier 6th 5610.
 849 III. (£5).—E. & B. KELSEY, Wickham Court, Canterbury, for Wickham Chevalier 4th 6792, born Jan. 10; s. Oakover Chevalier 6th 5610, d. Wickham Court Beauty 45th 18154 by Linton 14th 3849.

Class 110.—Sussex Cows or Heifers (in-milk), born on or before 1925.

- 850 I. (£15, & Champion.²)—BRIG.-GEN. G. HOLDSWORTH, C.B., C.M.G., Glynde Place, Glynde, Sussex, for Drungewick Daisy 18th 19107, born Feb. 28, 1920, calved Jan. 25, 1928, bred by the late E. E. Braby, Drungewick Manor, Rudgwick, Sussex; s. Drungewick A One 7th 4582, d. Drungewick Daisy 14th 16712 by Drungewick Marksman 3rd 3274.
 851 II. (£10).—E. & B. KELSEY, Wickham Court, Canterbury, for Wickham Court Beauty 81st 22777, born Feb. 2, 1925, calved March 2, 1928; s. Oakover Chevalier 6th 5610, d. Wickham Court Beauty 45th 18154 by Linton 14th 3849.

Class 111.—Sussex Heifers, born in 1926.

- 858 I. (£15, & R. N. for Champion.²)—LT.-COL. J. B. WARREN, The Hyde, Handcross, Haywards Heath, for Look Knelle 23244, born March 16, bred by E. Ezra, Look, Partridge Green, Sussex; s. Bolebroke Harlequin 3rd 6247, d. Marlands Lady Knelle 20113 by Jacobite 5116.
 856 II. (£10).—E. & B. KELSEY, Wickham Court, Canterbury, for Wickham Court Beauty 89th 23415, born Feb. 15; s. Oakover Chevalier 6th 5610, d. Wickham Court Beauty 45th 18154 by Linton 14th 3849.
 854 III. (£5).—BRIG.-GEN. G. HOLDSWORTH, C.B., C.M.G., Glynde Place, Glynde, Sussex, for Caburn Beauty 3rd 23360, born Jan. 16; s. Bolebroke Lad 6th 6008, d. Caburn Gladeys 20747 by Wadden Swell 4891.
 857 R. N.—E. & B. KELSEY, for Wickham Court Beauty 90th.

¹ Champion Silver Medal, given by the Sussex Herd Book Society, for the best Bull.

² Perpetual Silver Challenge Trophy, given through the Sussex Herd Book Society, for the best Bull.

³ Champion Silver Medal, given by the Sussex Herd Book Association, for the best Cow or Heifer.

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Class 112.—Sussex Heifers, born in 1927.

- 865 I. (£15.)—BRIG.-GEN. G. HOLDSWORTH, C.B., C.M.G., Glynde Place, Glynde, Sussex, for Caburn Beauty 4th 24039, born Jan. 25; s. Bolebroke Lad 8th 6008, d. Caburn Gladeys 20747 by Wadden Swell 4891.
 864 II. (£10.)—L. O. JOHNSON, Peppers, Ashurst, Steyning, Sussex, for Kings Barn Prunella 2nd 24090, born Feb. 14; s. Kings Barn Sunbright 8213, d. Kings Barn Patience 20781 by Somerhill Courier 4656.
 863 III. (£5.)—L. O. JOHNSON, for Kings Barn Dusky 24088, born Jan. 24; s. Kings Barn Sunbright 8213, d. Lock Darkey 13th 15900 by Tutsham Beau 3212.
 866 R. N.—LT.-COL. J. B. WARREN, The Hyde, Handcross, Haywards Heath, for Look Briar 4th.
 H. C.—862.

Welsh.

Class 113.—Welsh Bulls, born on or before November 30, 1926.

- 870 I. (£15, & Champion.)—R. M. GREAVES, Wern, Portmadoc, for Wern Sentry 1542, born Sept. 20, 1919; s. Snowdon Idwal 1192, d. Wern Ideal 1280 by Duke of Wellington 294.
 869 II. (£10.)—J. C. GRAHAM, Clwyd Hall, Ruthin, for Plisdon Baldwin 2921, born Aug. 13, 1924, bred by S. H. Jenks, Plisdon Manor, Bridport; s. Ty Cross Llewellyn 2376, d. Penrhos Branwen 4640 by Nipper of Penrhyn 1131.
 871 III. (£5.)—MRS. E. H. SPOTTISWOODE, Nantyffrith, Bwlchgwyn, Wrexham, for Gwern Arwr 3115, born Dec. 5, 1924; s. Caradoc of Glascoed 2436, d. Tregarn Fawr 3763 by Pencae Cawr 440.
 867 R. N.—BROGYNTYN ESTATE COMPANY, Glyn Home Farm, Talsarnau, for Caradoc 3rd of Pynlimon.
 H. C.—868.

Class 114.—Welsh Bulls, born on or between December 1, 1926, and November 30, 1927.

- 874 I. (£15, & R. N. for Champion.)—MRS. E. H. SPOTTISWOODE, Nantyffrith, Bwlchgwyn, Wrexham, for Gwern Cymro 4965, born Dec. 29, 1926; s. Nonsuch of Glascoed 2390, d. Gwern Afal 8718 by Glynllifon John 1367.
 873 II. (£10.)—A. G. JOYNSON, Grove Hall, Capenhurst, Chester, for Grove Major, born May 2, 1927; s. Cym Royalist 2747, d. Penilyn Mwynen 4th 5580 by Penilyn Jack 1441.

Class 115.—Welsh Cows or Heifers (in-milk), born on or before November 30, 1925.

- 876 I. (£15, & Champion.)—J. C. GRAHAM, Clwyd Hall, Ruthin, for Cym Doll 5823, born Feb. 23, 1922, calved June 19, 1923, bred by J. W. Holland, Cym Farm, Abersoch; s. Cym Chamberlain 1908, d. Cym Mary 4990 by Lord Roberts 921.
 877 II. (£10.)—J. C. GRAHAM, for Escuan Shonaf 5742, born Sept. 26, 1922, calved Dec. 9, 1927, bred by H. J. Evans, Escuan Hall, Towyn; s. Dyffryn Caswallon 1013, d. Escuan Blackan 2026 by Escuan Meurig 437.
 879 III. (£5.)—A. G. JOYNSON, Grove Hall, Capenhurst, Chester, for Llysleu Martha 2nd 7708, born Jan. 3, 1924, calved Dec. 9, 1927, bred by D. Lloyd, Llysleu, Anglesey; s. Bodrida John 1581, d. Waen Martha 2nd 4760 by Herald of Penrhyn 1143.
 878 R. N.—R. M. GREAVES, Wern, Portmadoc, for Bodrida Iand Dau.
 H. C.—875.

Class 116.—Welsh Cows or Heifers (in-milk), any age, whose milk yield has been officially recorded and checked.³

- 881 I. (£15, & Champion.)—EARL FITZWILLIAM, K.C.V.O., C.B.E., D.S.O., Wentworth Woodhouse, Rotherham, for Helen 4th of Penrhyn 7824, born May 7, 1922, calved May 10, 1928, bred by Lord Penrhyn, Penrhyn Castle, Bangor; s. Gamecock of Penrhyn 1650, d. Helen 2nd of Penrhyn 2306 by Madryn Cawr 488.
 883 II. (£10, & R. N. for Champion.)—MRS. E. H. SPOTTISWOODE, Nantyffrith, Bwlchgwyn, Wrexham, for Gwern Clementine 7149, born Feb. 28, 1922, calved June 10, 1923; s. Snowdon General 1774, d. Glyn Lady Newydd 9th 3890 by Glyn Togo 934.
 880 III. (£5.)—EARL FITZWILLIAM, K.C.V.O., C.B.E., D.S.O., for Bryseyni Mwynddu 7th 4446, born May 13, 1920, calved Nov. 27, 1927, bred by Morris Parry, Bryseyni, Glynog, Llanwda; s. Bomb of Penrhyn 1136, d. Bryseyni Mwynddu 4th 4438 by Llanybyn 604.

Class 117.—Welsh Heifers, born on or between December 1, 1925, and November 30, 1926.

- 887 I. (£15, & R. N. for Champion.)—A. G. JOYNSON, Grove Hall, Capenhurst, Chester, for Cym Mari 2nd, born Dec. 9, 1925, bred by J. W. Holland, Cym Farm, Abersoch, Carnarvonshire; s. Puntgwair King 2346, d. Cym Mary 4990 by Lord Roberts 921.

¹ Champion Bronze Medal, given by the Welsh Black Cattle Society, for the best Bull.

² Champion Bronze Medal, given by the Welsh Black Cattle Society, for the best Cow or Heifer.

³ Prizes given through the Welsh Black Cattle Society.

⁴ Silver Salver, given through the Welsh Black Cattle Society, for the First Prize Animal in Class 116.

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- 885 II. (£10).—J. C. GRAHAM, Clwyd Hall, Ruthin, for Graemes Doli 9021, born Feb. 8, 1926 s. Heaton Jack 2514, d. Cim Doli 5823 by Cim Chamberlain 1908.
 886 III. (£5).—R. M. GRAVES, Wern, Portmadoc, for Bodfeirig Maggie, born March 21, 1926, bred by Thomas Mulr, Bodfeirig, Ty Croes, Anglesey; s. Penmaen Major.
 884 R. N.—BROGYNTYN ESTATE COMPANY, Glyn Home Farm, Talsarnau, for Gwernhefin Mair.

Class 118.—*Welsh Heifers, born on or between December 1, 1926, and November 30, 1927.*

- 898 I. (£15).—MRS. E. H. SPOTTISWOODE, Nantyffrith, Bwlchgwyn, Wrexham, for Gwern Cadi, born May 3, 1927; s. Gwern Arwr 3115, d. Corwen Molly 5206 by Trumpet of Penrhyn 1142.
 890 II. (£10).—R. M. GRAVES, Wern, Portmadoc, for Wern Grace, born Dec. 14, 1926; s. Wern Emperor 3262, d. Wern Bluebell 5774 by Wern Sentry 1542.
 888 III. (£5).—BROGYNTYN ESTATE COMPANY, Glyn Home Farm, Talsarnau, for Glyn Redshank, born Dec. 9, 1926, bred by Lord Harlech, Glyn Home Farm; s. Plas Samson 2925, d. Glyn Kittiwake 4116 by Madryn Joffre 1147.
 889 R. N.—J. C. GRAHAM, Clwyd Hall, Ruthin, for Graemes Ringlet.
 H. C.—891.

Longhorns.

Class 119.—*Longhorn Bulls, born in or before 1927.*

- 897 I. (£15).—R. S. WALTERS, Norfolk Lodge, Sutton Coldfield, Warwickshire, for Arden Final 891, red brindle and white, born April 15, 1925, bred by the late W. H. Sale, Arden Hill, Atherstone; s. Arden Warrior 806, d. Arden Fashion by Arden Dictator 762.
 896 II. (£10).—J. W. SWINNERTON-WESTON, Over Whitacre, Birmingham, for Bentley Prodral 916, brindle and white, born Oct. 24, 1926, bred by W. H. Crofts, Bentley, Warwickshire; s. Arden Select 892, d. Arden Flower by Stivichall Cure 833.
 895 III. (£5).—F. J. MAYO, Friar Waddon, Weymouth, for Waddon Monty 832, red, brindle and white, born Nov. 7, 1927; s. Arden Sunstar 898, d. Waddon Molly (Vol. 15, p. 12) by Lavender Earl 816.

Class 120.—*Longhorn Cows or Heifers (in-milk), born in or before 1925.*

- 903 I. (£15).—J. W. SWINNERTON-WESTON, Over Whitacre, Birmingham, for Larkspur of Chippinghurst (Vol. 13, p. 26), red brindle and white, born Feb. 4, 1923, calved June 10, 1928, bred by Alfred Wheeler, Chippinghurst, Cuddesdon, Oxon; s. Chippinghurst Greatheart 812, d. Linnet of Chippinghurst by Rousham Romper 788.
 899 II. (£10).—F. J. MAYO, Friar Waddon, Weymouth, for Friar Sprig (Vol. 14, p. 13), red and white, born in 1919, calved June 4, 1928; s. Aston 725, d. Brandy.
 901 III. (£5).—MAJOR H. MITCHESON, Bentley, Atherstone, for Angelina Lascelles (Vol. 13, p. 13), brindle and white, born March 14, 1922, calved May 29, 1928, bred by Thomas S. Hands, Canley, Coventry; s. Quack 828, d. Angelina Fitzroy by Admiral 632.
 906 IV. (£4).—BETRAM WORRALL, Steeple Aston, Oxford, for Flash of Rousham (Vol. 13, p. 28), red brindle and white, born May 8, 1922, calved June 14, 1928; s. Luke 818, d. Romp of Rousham by Rousham Robin 615.
 898 R. N.—F. J. MAYO, for Candytuft.

Aberdeen-Angus.

Class 121.—*Aberdeen-Angus Bulls, born on or before November 30, 1925.*

- 908 I. (£15, Champion,¹ Champion,² & R. N. for Champion.³)—J. J. CRIDLAN, Maise more Park, Gloucester, for Evader of Harviestoun 52826, born May 30, 1922, bred by J. E. Kerr, Harviestoun Castle, Dollar; s. Euripus of Ballindalloch 42615, d. Evergola of Harviestoun 56657 by Prince of the Wassail 28751.
 909 II. (£10).—A. MCINTYRE, Theakston Hall, Bedale, for Kinsman of Lochbank 59782, born Jan. 12, 1925, bred by A. W. Howison, Lochbank, Blairgowrie, Perthshire; s. Romping Rover 51508, d. Kieksahaw of Tullochgribban 68064 by Evince of Ballindalloch 41555.
 910 III. (£5).—F. HAROLD TURNBULL, Lower House Farm, Llantwit Major, Cardiff, for Black Ben of Llantwit 58484, born Dec. 13, 1924; s. Franksome 53401, d. Blackberry 3rd of Castlecairg 70441 by Froud Eric of Aberlour 44516.

Class 122.—*Aberdeen-Angus Bulls, born on or between December 1, 1925, and November 30, 1926.*

- 911 I. (£15).—SIR HENRY BELL, BART., Mynthurst, Leigh, Reigate, for Erebus of Candacraig 61475, born Jan. 14, 1926, bred by F. L. Wallace, Candacraig, Strathdon, Aberdeenshire; s. Prince of Salonica 56645, d. Eburnette 2nd of Candacraig 68864 by Ego 41252.

¹ Perpetual Silver Challenge Trophy, given through the Aberdeen-Angus Cattle Society, for the best Bull.

² Champion Gold Medal, given by the English Aberdeen-Angus Cattle Association, for the best animal of the opposite sex to that of the animal awarded the Champion Gold Medal of the Aberdeen-Angus Cattle Society.

³ Champion Gold Medal, given by the Aberdeen-Angus Cattle Society, for the best animal.

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- 913 II. (#10).—COL. C. W. SOFER WHITEBURN, Ampert St. Mary, Andover, for Proud Baladan of The Burn 62756, born Jan. 24, 1926, bred by G. H. Russell, The Burn, Edzell, Scotland; s. Everill of Ballindalloch 52678, d. Pride of Balgean 74173 by Jurum of Ballindalloch 43920.
- 912 III. (#5).—WELBROOK ESTATES CO., LTD., Mansfield Woodhouse, Notts, for Peter of Buckland 4th 62497, born Feb. 17, 1926, bred by C. T. Scott, Buckland Manor, Broadway, Worcs.; s. Victor 2nd of Buckland 55952, d. Bridesmaid 3rd of Buckland 68147 by Etrurian of Bleaton 41498.

Class 123.—Aberdeen-Angus Bulls, born on or between December 1, 1926, and November 30, 1927.

- 920 I. (#15, R. N. for Champion.¹ & R. N. for Champion.²)—SIR PRINCE PRINCE-SMITH, BART., Southburn House, Driffield, for Priority of Southburn 65544, born April 13, 1927; s. Rufus of Buckland 53693, d. Pride of Ampert 80104 by Euryalus of Ballindalloch 43123.
- 915 II. (#10).—MAJOR W. BONN, D.S.O., Newbold Revel, Rugby, for Barton of Newbold 63258, born Feb. 4; s. Evermore of Ampert 59321, d. Barton of Newbold 75865 by Esmond of Newbold 50373.
- 918 III. (#5).—LORD GLENCONNER, The Glen, Innerleithen, Peebleshire, for Enterprise of Glen 64137, born March 25, 1927; s. Eclipse of Milford 52263, d. Empress of Nisbethill 76229 by Prince of Pedigree 44448.
- 917 IV. (#4).—THE EARL OF DURHAM, K.G., Lambton Castle, Fence Houses, Co. Durham, for Euros of Lambton 64340, born Feb. 4, 1927; s. Rodeman 58020, d. Earline of Ach-nagounah 67318 by Eventus of Ballindalloch 39581.
- 922 E. N.—SIR PRINCE PRINCE-SMITH, BART., for Romulus of Southburn.

Class 124.—Aberdeen-Angus Cows or Heifers (in-milk), born on or before November 30, 1925.

- 927 I. (#15, Champion.³ & Champion.⁴)—JAMES BIDDIE, Banks, Strichen, Aberdeenshire, for Gammer Iona 73458, born Feb. 15, 1923, calved April 15, 1928; s. Delegate of Banks 49955, d. Joyful Gammer 66398 by Joyful Eric 43923.
- 931 II. (#10).—CHARLES THOMAS SCOTT, Buckland Manor, Broadway, Worcs., for Eutharis 2nd of Buckland 75124, born Dec. 17, 1922, calved Dec. 28, 1927; s. Proud George 38595, d. Eutharis of Buckland 65761 by Etrurian of Bleaton 41498.
- 932 III. (#5).—F. HAROLD TURNBULL, Lower House Farm, Llantwit Major, Cardiff, for Black Bara 70968, born Jan. 24, 1922, calved Jan. 17, 1928, bred by D. M. Allan, Ballintomb, Grantown-on-Spey; s. Evendale of Bleaton 48139, d. Blackskin of Ballintomb 53609 by George R. of Ballindalloch 30611.
- 928 E. N.—SIR HENRY BELL, BART., Mynthurst, Leigh, Reigate, for Black Ink.

Class 125.—Aberdeen-Angus Heifers, born on or between December 1, 1925, and November 30, 1926.

- 934 I. (#15, Champion.⁵ & R. N. for Champion.⁶)—VISCOUNT ALLENDALE, Dilston, Corbridge-on-Tyne, for Pride of Tynevale 80322, born Feb. 20, 1926; s. Erebus of Harviestoun 56780, d. Pride of Place 73360 by Placeman of Bywell 45928.
- 935 II. (#10).—SIR HENRY BELL, BART., Mynthurst, Leigh, Reigate, for Ishall 80434, born Jan. 2, 1926; s. Effendi of Doonholm 54406, d. Mynthurst Isolina 3rd 66415 by General Petain of Frampton 39714.
- 938 III. (#5).—SIR PRINCE PRINCE-SMITH, BART., Southburn House, Driffield, for Iris of Southburn 82378, born Jan. 24, 1926; s. Rufus of Buckland 53693, d. Iris 3rd of Bourne 78505 by Editor of Bourne 45505.
- 936 E. N.—J. J. CRIDLAN, Maisemore Park, Gloucester, for Blackbird 21st of Maisemore.

Class 126.—Aberdeen-Angus Heifers, born on or between December 1, 1926, and November 30, 1927.

- 958 I. (#15).—F. HAROLD TURNBULL, Lower House Farm, Llantwit Major, Cardiff, for Rebecca of Llantwit 85568, born Feb. 11, 1927; s. Ethus of Morlich 56885, d. Rachel 5th of Castle Craig 70446 by Everest of Bleaton 45882.
- 943 II. (#10).—VISCOUNT ALLENDALE, Dilston, Corbridge-on-Tyne, for Elusive of Bywell 82965, born Dec. 6, 1926; s. Grandee of Bywell 57159, d. Milana 59159 by Pride's Reviver 33660.
- 954 III. (#5).—SIR PRINCE PRINCE-SMITH, BART., Southburn House, Driffield, for Plasma of Southburn 85331, born Dec. 12, 1926; s. Viceroy of Willet 58180, d. Plasma 3rd of Frampton 66470 by General Picton 45985.
- 960 IV. (#4).—E. G. WHEELER-GALTON, Claverdon Leys, Warwick, for Black Bess of Claverdon 85665, born Dec. 21, 1926; s. Pimpo of Aughterarder 53348, d. Blackberry of Claverdon 77877 by Prime Scot of Claverdon 48989.

¹ Perpetual Silver Challenge Trophy, given through the Aberdeen-Angus Cattle Society for the best Bull.

² Silver Medal, given by the English Aberdeen-Angus Cattle Association, for the best animal bred in England or Wales.

³ Champion Gold Medal, given by the Aberdeen-Angus Cattle Society, for the best animal.

⁴ Silver Medal, given by the Argentine Aberdeen-Angus Association, for the best animal bred by Exhibitor.

- 956 V. (23).—CHARLES THOMAS SCOTT, Buckland Manor, Broadway, Worcs., for Bridesmaid 6th of Buckland 85243, born Feb. 9, 1927; s. Black Prince 3rd of Buckland 58491, d. Bridesmaid 3rd of Buckland 68147 by Etrurian of Bleaton 41498.
 945 R. N.—SIR HENRY BELL, BART., Mynthurst, Leigh, Reigate, for Equal of Mynthurst Cup.¹—SIR PRINCE PRINCE-SMITH, BART.
 R. N. for Cup.¹—SIR HENRY BELL, BART.

Belted Galloways.

Class 127.—Belted Galloway Bulls, born on or before November 30, 1926.

- 964 I. (£15, & Champion.²)—MAJOR IAN BULLOUGH, Drury Lane Farm, Redmarley, Newent, Glos, for Allington Concrete 467B, born Jan. 17, 1924, bred by G. H. Woodman, Osborne House, Polegate; s. Allington Hector 17B, d. Allington Primrose 125B.
 968 II. (£10).—JAMES WESTOLL, JUNR., Glingerbank, Longtown, Cumberland, for Glenzier Wallace 597B, born Feb. 12, 1926; s. Mochrum Royal Blend 463B, d. Mark Dolly 206B.
 966 III. (£5).—GEN. SIR IAN HAMILTON, Lullenden Farm, East Grinstead, for Lullenden Douglas 449B, born Sept. 9, 1924; s. Knockbrex St. Andrew 111B, d. Lullenden Knockbrex Victoria (App. A) by Knockbrex Certainty 44B.
 967 R. N.—GEN. SIR IAN HAMILTON, for Lullenden Dundee.

Class 128.—Belted Galloway Bulls, born on or between December 1, 1926, and November 30, 1927.³

- 973 I. (£15).—ROBERT CRYSTAL IRVING, Shenley Lodge, Ridge Hill, Barnet, for Shenley Aristocrat 779B, born May 9, 1927; s. Knockbrex Prince Imperial 109B(D), d. Shenley Index 854B by Mochrum Sir Robert of Craigeach 60B.
 969 II. (£10).—J. DOUGLAS BROWN, Knockbrex, Kirkcudbright, for Knockbrex Earl Marshal 687B, born March 3, 1927; s. Mindork Admiral 58B, d. Knockbrex Augusta 343B by Knockbrex Pollux 49B.
 970 III. (£5).—J. DOUGLAS BROWN, for Knockbrex Esquire, 695B, born March 17, 1927; s. Mindork Admiral 58B, d. Knockbrex Lady Anne 351B by Knockbrex Pollux 49B.
 972 R. N.—GEN. SIR IAN HAMILTON, Lullenden Farm, East Grinstead, for Lullenden Falstaff.

Class 129.—Belted Galloway Cows or Heifers (in-milk), born on or before November 30, 1925.

- 974 I. (£15, & R. N. for Champion.²)—J. DOUGLAS BROWN, Knockbrex, Kirkcudbright, for Knockbrex Claire 762B, born April 4, 1925, calved Feb. 23, 1928; s. Knockbrex Pollux 49B, d. Halmyre Dandy 152B by Halmyre Donald 39B.
 978 II. (£10).—ROBERT CRYSTAL IRVING, Shenley Lodge, Ridge Hill, Barnet, for Clauchrie Lady Alice 137B(D), born in 1920, calved Dec. 13, 1927, bred by James Muir, Clauchrie, Wigtown; d. Clauchrie Lady Ann 138B by Boreland Champion 21B(D).
 976 III. (£5).—J. DOUGLAS BROWN, for Knockbrex Czarina 766B(D), born April 8, 1925, calved March 2, 1928; s. Knockbrex Pollux 49B, d. Knockbrex Lady Teasdale 179B.
 979 R. N.—JAMES WESTOLL, JUNR., Glingerbank, Longtown, Cumberland, for Mark Dora 2nd.

Class 130.—Belted Galloway Heifers, born on or between December 1, 1925, and November 30, 1926.³

- 980 I. (£15).—J. DOUGLAS BROWN, Knockbrex, Kirkcudbright, for Knockbrex Diamond 970B, born March 25, 1926; s. Knockbrex Beau Brummel 443B, d. Knockbrex Lady Belinda 175B by Knockbrex Viking 50B.
 986 II. (£10).—ROBERT CRYSTAL IRVING, Shenley Lodge, Ridge Hill, Barnet, for Durdans Alpha 970B, born March 30, 1926, bred by the Earl of Rosebery, K.G., Durdans, Epsom; s. Durdans Chieftain 905B, d. Durdans Hengist 902B.
 981 III. (£5).—MAJOR IAN BULLOUGH, Drury Lane Farm, Redmarley, Newent, Glos, for Redmarley Lichen, born Feb. 10, 1926; s. Eastington Knockbrex Pirate 30B, d. Eastington Gorse (App. B, Vol. 1).
 982 R. N.—MAJOR IAN BULLOUGH, for Redmarley Myrtle.

Class 131.—Belted Galloway Heifers, born on or between December 1, 1926, and November 30, 1927.

- 987 I. (£15).—J. DOUGLAS BROWN, Knockbrex, Kirkcudbright, for Knockbrex Echo 1280B, born May 17, 1927; s. Knockbrex Pollux 49B, d. Knockbrex Lady Teasdale 179B.
 995 II. (£10).—ROBERT CRYSTAL IRVING, Shenley Lodge, Ridge Hill, Barnet, for Shenley Lady Anabel 1514B, born April 5, 1927; s. Knockbrex Claudius 595B, d. Clauchrie Lady Ann 138B by Boreland Champion 21B(D).

¹ Silver Challenge Cup, given through the English Aberdeen-Angus Cattle Association, for the most points awarded in a combination of entries.

² The "Knockbrex" Perpetual Silver Challenge Cup, given through the Dun and Belted Galloway Cattle Breeders' Association, for the best Belted Galloway.

³ Prizes given by the Dun and Belted Galloway Cattle Breeders' Association.

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- 997 **III. (£5).**—JAMES WESTOLL, JUNR., Glingerbank, Longtown, Cumberland, for *Glenzier Witty* 1496B, born March 1, 1927; *s.* Mochrum Foundation 461B, *d.* Falby (Black Galloway).
- 998 **IV. (£4).**—J. DOUGLAS BROWN, for *Knockbrex Eve* 1296B, born Feb. 17, 1927; *s.* Mindork Admiral 56B, *d.* Knockbrex Beryl 612B by Boreland Prodigal 23B.
- 999 **R. N.**—JAMES WESTOLL, JUNR., for *Glenzier White May*.

Galloways.

Class 132.—Galloway Bulls, born on or before November 30, 1927.

- 999 **I. (£15).**—ROBERT GRAHAM, Chapel of Logan, Canonbie, for *Grange Beau Brocade* 14649, born Dec. 19, 1920, bred by Walter Biggar, Grange Farm, Dalbeattie; *s.* Serbian 13969, *d.* Lizzie 7th of Chapelton 22782 by Sweepstakes 10001.
- 1000 **II. (£10).**—LADY HENLEY, Askerton Castle, Brampton, Cumberland, for *Uordon Bleu* 16103, born April 23, 1926, bred by James Carlyle, The Oaks, Kirkpatrick-Fleming, Lockerbie; *s.* Barmark Gladiator 15555, *d.* Tasty of Dunnabie 24472 by Nero of Barlas 12147.

Class 133.—Galloway Cows or Heifers (in-milk), born on or before November 30, 1925.

- 1001 **I. (£15, & R. N. for Champion.¹)**—CHRISTOPHER E. GRAHAM, Bogrie, Canonbie, for *Lady Mabel of Barnsoul* 27931, born Jan. 25, 1924, calved Dec. 11, 1927, bred by the Executors of the late Herbert Haggas, Barnsoul, Dumfries; *s.* Random 14390, *d.* Lavender of Barnsoul 27593 by Master Mark of Dalwyne 12618.
- 1002 **II. (£10).**—ROBERT GRAHAM, Chapel of Logan, Canonbie, for *Logan Lady 15th* 29714, born March 20, 1924, calved Dec. 12, 1927; *s.* Horace of Killearn 14429, *d.* Logan Lady 5th 28463 by Owen of Barlas 12498.
- 1003 **III. (£5).**—LADY HENLEY, Askerton Castle, Brampton, Cumberland, for *Bell 3rd of Askerton* 30292, born Dec. 2, 1924, calved Dec. 26, 1927; *s.* Warbond 2nd of Corrie-halls 14837, *d.* Eilan Vannin 2nd 27952 by Merry Mark 2nd 13757.

Class 134.—Galloway Heifers, born on or between December 1, 1925, and November 30, 1926.

- 1009 **I. (£15, & Champion.¹)**—ROBERT GRAHAM, Chapel of Logan, Canonbie, for *Logan Lady 19th* 30863, born March 3, 1926; *s.* Jovial of Barnsoul 15593, *d.* Logan Lady 5th 28463 by Owen of Barlas 12498.
- 1008 **II. (£10).**—CHRISTOPHER E. GRAHAM, Bogrie, Canonbie, for *May Queen 4th of Logan* 30862, born Jan. 3, 1926, bred by Robert Graham, Chapel of Logan, Canonbie; *s.* Jovial of Barnsoul 15593, *d.* May Queen of Logan 28083 by Quibbler 14051.
- 1010 **III. (£5).**—LADY HENLEY, Askerton Castle, Brampton, Cumberland, for *Zellah 2nd of Askerton* 30879, born Dec. 21, 1925; *s.* Colonel of Auchineden 15533, *d.* Zellah of Askerton 29116 by Punch of Dalwyne 13727.
- 1005 **R. N.**—W. B. DONALDSON, Auchineden Farm, Blanesfield, Stirlingshire, for *Beauty of Auchineden*.

Class 135.—Galloway Heifers, born on or between December 1, 1926, and November 30, 1927.²

- 1014 **I. (£15).**—FRANCIS N. M. GOURLAY, Kirkland, Tynron, Thornhill, Dumfriesshire, for *Favourite of Kirkland* 31435, born Feb. 21, 1927; *s.* Oscar of Auchenhay 15779, *d.* Fenella 5th of Craigston 27569 by Raleigh of Killearn 11088.
- 1012 **II. (£10).**—W. B. DONALDSON, Auchineden Farm, Blanesfield, Stirlingshire, for *Orange of Auchineden* 31341, born Dec. 8, 1926; *s.* Warbond of Corrie-halls 14518, *d.* Olivia of Killearn 26897 by Cuthbert 11450.
- 1013 **III. (£5).**—FRANCIS N. M. GOURLAY, for *Countess of Kirkland* 31433, born Feb. 5, 1927; *s.* Oscar of Auchenhay 15779, *d.* Grange Countess 2nd 27918 by Kenneth of Killearn 11370.
- 1015 **R. N.**—ROBERT GRAHAM, Chapel of Logan, Canonbie, for *May Queen 6th*.

Dairy Shorthorns.

Class 138.—Dairy Shorthorn Bulls, born in or before 1925.

- 1025 **I. (£5, & Champion.³)**—ROBERT N. TONY, Anderson, Blandford, for *Anderson Champion* Bates 186667, roan, born Oct. 30, 1923; *s.* Kelmscott Conjuror 3rd 137289, *d.* Damory Kirklevington 5th by Prince of Pearls 103408.

¹ The "Jubilee" Perpetual Silver Challenge Cup, given by the Galloway Cattle Society, for the best Galloway.

² Prizes given by the Galloway Cattle Society.

³ Champion Prize of £10, given by the Dairy Shorthorn Association, for the best Bull.

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- 1026 II. (£10, & R. N. for Champion.)—ROBERT N. TORY, for Anderson Lord Conjuror 195657, roan, born Sept. 2, 1924; s. Conjuror 2nd 179738, d. Anderson Lady 2nd by Count Waldron 2nd 114863.
- 1019 III. (£5.)—E. S. HORNE, Aldsworth, Emsworth, Hants, for Breat Barrington Snowstorm 205361, white, born June 18, 1925, bred by Capt. P. D. A. Courtenay, Burnham-on-Sea; s. Throop Conjuror 194658, d. Ansford Barrington Duchess 3rd by Woodman 14th 128952.
- 1024 IV. (£4.)—F. H. THORNTON, Kingsthorpe Hall, Northampton, for Kingsthorpe Count Rubio 4th 208775, dark roan, born Oct. 6, 1925; s. Kingsthorpe Fairy Duke 164556, d. Kingsthorpe Countess Ruby 2nd by Kingsthorpe Rubio 2nd 131775.
- 1020 E. N.—DANIEL JOHNSON, Ormathwaite Hall, Keswick, for Wild Eyes Prince.

Class 139.—Dairy Shorthorn Bulls, born in 1926.

- 1046 I. (£15.)—CHARLES B. WORSEY, Yew Tree Farm, Lapworth, Birmingham, for Abbotswood Royalist 17th 212766, roan, born April 15, bred by M. Fenwick, Abbotswood; s. Foxhill Royal Pearl 180901, d. Abbotswood Janette 4th by Roan Duke 122449.
- 1030 II. (£10.)—HENRY BICKFORD, Standeford, Four Ashes, Wolverhampton, for Standeford Dollar 77th 219320, roan, born Jan. 13; s. Somerford Marquis 185276, d. Standeford Dolly 44th by Broadhooks Chief 129935.
- 1041 III. (£5.)—R. SILCOCK & SONS, LTD., Thornton Hall Farm, Thornton-le-Fylde, Lancs, for Pearls Masterpiece 218077, dark roan, born April 8, bred by M. and M. J. Robson, Harberwain, Shap, Westmorland; s. Leeming Politician 173380, d. Pearl Queen by Briar Bush 155349.
- 1044 IV. (£4.)—F. H. THORNTON, Kingsthorpe Hall, Northampton, for Kingsthorpe Count Rubio 5th 216810, white, born May 24; s. Grendon Blanco 190226, d. 43400 Kingsthorpe Countess Ruby 4th by Kingsthorpe Fairy Duke 164556.
- 1029 V. (£3.)—JOHN BECKETT, JUNR., Chells Hill Farm, Betchton, Sandbach, for Betchton Pride 213509, dark roan, born March 5; s. Heather Pride 199415, d. 539 Betchton Lily 2nd by Moorland Chieftain 144054.
- 1031 E. N.—ALBERT CHARLES BROWN, The Gables, Fernhill Heath, Worcester, for Fieldgrove Conjuror 29th.

Class 140.—Dairy Shorthorn Bulls, born on or between January 1 and March 31, 1927.

- 1063 I. (£15.)—W. E. STAMER, Pentrehyll Heath, Ellesmere, for Oxford White Knight, white, born Feb. 3; s. Colescombe Graceful Lad 154993, d. Oxford Countess (Vol. 63, p. 1218) by Prince of Avon 132822.
- 1055 II. (£10.)—E. E. DEBENHAM, Bladen Farms, Briantspuddle, Dorchester, for Anderson Imperial Bates, roan, born Jan. 3, bred by Robert N. Tory, Anderson, Blandford; s. Longhills Lord Carolus 173565, d. Damory Kirklevington 5th (Vol. 56, p. 1190) by Prince of Pearls 103408.
- 1040 III. (£5.)—H. A. BROWN, Croft House, Grendon Atherstone, for King's Proctor, red roan, born Feb. 27; s. Grendon White Hope 163784, d. 252 Princess Proctor 8th by Wedgewood 146240.
- 1061 IV. (£4, & Special.)—T. A. ROSE, Churchill Heath, Kingham, Oxford, for Churchill Hercules, roan, born Feb. 17; s. Churchill Chancellor 188424, d. 29606 Churchill Primrose 4th by Gaiety Rover 155922.
- 1062 V. (£3.)—R. SILCOCK & SONS, LTD., Thornton Hall Farm, Thornton-le-Fylde, Lancs, for Harberwain Mascot 2nd, dark roan, born Feb. 8, bred by John Robson, Harberwain, Shap, Westmorland; s. Olive's Gift 183620, d. 54502 Lady Grey by Leeming Politician 173389.
- 1067 E. N. & R. N. for Special.—CECIL M. WILLS, Old Sneed Park, Stoke Bishop, Bristol, for Batsford Thaumaturgus, red and little white, born Jan. 29, bred by Sir Gilbert A. H. Wills, Bart., Batsford Park, Moreton-in-Marsh; s. Sorbrook Troubadour 194229, d. 48626 Plaspower Welcome by Wild Dairyman 168054.
- 1040, 1157, 1158 Cup.—H. A. BROWN, for King's Proctor, Etta Wild Eyes 4th and Grendon Pippy.

Class 141.—Dairy Shorthorn Bulls, born on or between April 1 and June 30, 1927.*

- 1076 I. (£15.)—CAPT. THE HON. E. A. FITZROY, M.P., Fox Hill, West Haddon, Rugby, for Fox Hill Wild Gem, roan, born April 21; s. Wild Eyes Dairyman 186266, d. Fox Hill Pearl (Vol. 65, p. 779) by Merry John 137980.
- 1066 II. (£10.)—RALPH TUSTIAN, The Leys, Great Tew, Oxford, for Great Tew Clarence 2nd, roan, born May 5; s. Sorbrook Clarence 194218, d. 43629 Great Tew Hilda by Bickerscote Pimpernel 158806.

* Champion Prize of £10, given by the Dairy Shorthorn Association, for the best Bull.

† Special Prize of £10, given by the Dairy Shorthorn Association, for the best Bull in Classes 140 to 142. The following cows in the pedigree of the Bull to be registered, or entitled to be registered, as qualified cows in the Dairy Shorthorn Association's Register: (1) The dam of the Bull's dam, (2) The dam of the dam of the Bull's sire, (3) The dam of the sire of the Bull's dam.

‡ Silver Challenge Cup, given through the Dairy Shorthorn Association, for the best group of one Bull and two Cows or Heifers. Two at least of the animals must have been bred by the Exhibitor.

§ Prizes, except Fourth and Fifth, given by the Dairy Shorthorn Association.

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- 1091 III. (#5.)—A. H. W. OSBORNE & SONS, Branch Farm, Mells, Frome, for Bricklington Wanderer, red and white, born May 14; s. Campsfield Squire 2nd 197042, d. 32592 Babraham Foremost 4th by Lord Lee 2nd 121257.
 1085 IV. (#4.)—E. MACINTOSH, Boxhill Farm, Dorking, for Foxbury Wild Prince 6th, dark roan, born May 2; s. Foxbury Wild Prince 198761, d. 42994 Catkin by Orford Desmond 4th 150890.
 1074 V. (#3.)—SIR MARK COLLET, BART., St. Clare, Kemsing, Sevenoaks, for St. Clare Masterpieces, red and little white, born May 25; s. Haddon Nonsuch 2nd 172198, d. Lady Casterton 2nd (Vol. 64, p. 993) by Walnut Emperor 3rd 113665.
 1072 R. N.—ALBERT CHARLES BROWN, The Gables, Fernhill Heath, Worcester, for Tapenhall Major.
 1088, 1184, 1185 R. N. for Cup.¹—LT.-COL. R. MOSTYN-OWEN, for Rednal Greenhorn 7th, Daisy 12th, and Rednal Celia 3rd.

Class 142.—Dairy Shorthorn Bulls, born on or between July 1 and December 31, 1927.

- 1119 I. (#15.)—ALFRED PALMER, Wokefield Park, Mortimer, Berks, for Wokefield Trojan, white, born Aug. 2; s. Brent Barrington Snowstorm 205361, d. 46862 Thurnham Darlington Cran 3rd by Thurnham Linksman 2nd 152578.
 1107 II. (#10.)—CHIVERS & SONS, LTD., Histon, Cambridge, for Histon Grand Duke 8th, roan, born Aug. 14; s. Baron Wild Eyes 187164, d. 960 Bartlow Grand Duchess 41st by Barrington Chief 134987.
 1108 III. (#5.)—CHIVERS & SONS, LTD., for Histon Lord Foggathorpe 7th, roan, born Sept 17; s. Foxhill New Year 180898, d. Leazow Foggathorpe 4th (Vol. 63, p. 644) by Freshute Bates 127356.
 1114 IV. (#4.)—G. W. ISHERWOOD, Edge Fold, Entwistle, Bolton, for Entwistle Lord Clare, roan, born Sept. 5; s. Dupplin Charming Boy 206974, d. 73331 Hilderstone Lady Clara 3rd by Hilderstone Dairyman 181608.
 1116 V. (#3.)—A. THOMAS LOYD, Lockinge House, Wantage, for Lockinge Brigand, roan, born Aug. 8; s. Rushcourt Bandit 202533, d. 57050 Thornby Princess Moira 6th by Thornby Dauntless Dairyman 152537.
 1123 R. N.—JAMES WILD, JUNR., Grotto Farm, Over Peover, Knutsford, for Barnshaw Magic.

Class 143.—Dairy Shorthorn Cows (in-milk), born on or before March 31, 1922, having yielded a minimum of 8,000 lb. of milk during a lactation period of 315 days.²

- 1188 I. (#15.)—LAWRENCE HIGNETT, Hook End Farm, Checkendon, Reading, for 14284 Green Leaf 78th, roan, born Feb. 16, 1920, calved May 22, 1928, bred by G. and J. Hope, Ireby Hall, Ireby; s. Iron Duke 143096, d. Green Leaf 58th by Revenue 117308.
 1144 II. (#10.)—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., Eaton Hall, Chester, 31623 Eaton Belle, roan, born March 22, 1921, calved June 22, 1928; s. Kennilworth True Boy 143246, d. Queen of France by Beau Furbelow 94254.
 1134 III. (#5.)—F. S. FRANCIS, Wilkinthorpe Farm, Templecombe, for 14190 Duntish Lee, roan, born Nov. 23, 1920, calved April 12, 1928, bred by Capt. P. A. Holford, Duntish Court, Buckland Newton; s. Furbelow King 136617, d. Lady Lee 24th by Darlington Dairy King 114992.
 1145 IV. (#4.)—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., for 9512 Lady Winsonia 17th, roan, born July 19, 1919, calved June 10, 1928, bred by T. W. Workman, Carlisle; s. Walby Star 128699, d. Lady Carleton 2nd by County Squire 111410.
 1135 V. (#3.)—E. G. G. FROST, West Wrattling Hall, Cambridge, for 15428 Illington Daughter, red and white, born Jan. 18, 1920, calved June 22, 1928, bred by E. McGregor, Manor Farm, Lillington, Leamington; s. Peacemaker 144371, d. Illington Dairymaid's Daughter 4th by Woolcombe King 146476.
 1128 R. N.—C. J. ALLDAY, Fotheringhay Manor, Peterborough, for Dunley Charm.
 H. C.—1136, 1146.

Class 144.—Dairy Shorthorn Cows (in-milk), born on or between April 1, 1922, and March 31, 1923, having yielded a minimum of 8,000 lb. of milk during a lactation period of 315 days.

- 1149 I. (#15.)—MAJOR R. F. FULLER, Great Chalfield, Melksham, for 36524 Chalfield Daffodil 7th, roan, born April 18, 1922, calved May 7, 1928; s. Wild Gift 146378, d. Chalfield Daffodil 6th by Romping Boy 133199.
 1150 II. (#10.)—G. P. GOLDEN, Eaglesfield, Leire, Rugby, for 36760 Lady Doreen 9th, red and little white, born Oct. 22, 1922, calved April 4, 1928; s. Lord Leicester 9th 164968, d. Lady Doreen by Gilmorton Lad 131188.
 1152 III. (#5.)—A. THOMAS LOYD, Lockinge House, Wantage, for 39147 Burghfield Belle, red and little white, born June 20, 1922, calved May 30, 1928, bred by Edward Lousley, Ardington, Wantage; s. Gainford Dairy Benefactor 148975, d. Longhills Belle by Duke of Darlington 115163.

¹ Silver Challenge Cup given through the Dairy Shorthorn Association, for the best group of one Bull and two Cows or Heifers. Two at least of the animals must have been bred by the Exhibitor.

² Prizes, except Fourth and Fifth, given by the Shorthorn Society.

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- 1156 IV. (24).—ROBERT N. TORY, Anderson, Blandford, for 44120 Rockley Barrington 8th, roan, born Aug. 25, 1922, calved May 26, 1928, bred by the late Hugh de Whotton, Rockley Manor, Marlborough; s. Rockley Dreamer 186545, d. 9011 Rockley Barrington 5th by Rockley Baronet 144978.
1150, 1160, 1175 Cup.—G. P. GOLDEN, for Lady Doreen 9th, Lady Clovelly, and Lady Doreen 16th.

Class 145.—Dairy Shorthorn Cows (in-milk), born on or between April 1, 1923, and March 31, 1924, having yielded a minimum of 6,500 lb. of milk during a lactation period of 315 days.

- 1166 I. (£15, & Champion).—P. R. L. SAVILL, Welford Grange, Rugby, for 52717 Wild Eyes Dairymaid 2nd, light roan, born Dec. 29, 1923, calved June 13, 1928, bred by J. Moffat, Spital, Kendal; s. Favourite Blend 180751, d. 16042 Wild Eyes Dairymaid by Premier Prince 144499.
1162 II. (£10).—SIR WILLIAM HICKING, BART., Brackenhurst Hall, Southwell, Notts, for 49094 Brackenhurst Jean, white, born June 21, 1923, calved May 11, 1928; s. Royal Ringleader 166746, d. 1030 Grendon Jeanie by Lord Nottingham 116317.
1164 III. (25).—G. W. ISSERWOOD, Edge Fold, Entwistle, Bolton, for 50207 Kalmecott Primula 189th, roan, born Dec. 29, 1923, calved June 22, 1928, bred by R. W. Hobbs & Sons, Kalmecott, Lechlade; s. Crème de Menthe 119683, d. Primula 175th by Dairy Prince 114977.
1158 IV. (24).—H. A. BROWN, Croft House, Grendon, Atherstone, for 46288 Grendon Pippy, roan, born Aug. 8, 1923, calved June 22, 1928; s. Lord Nottingham 116317, d. 2884 Lady Pippin by Thornby Iron Duke 145894.
1165 V. (23).—MAJOR G. MILLER MUNDY, Red Rice, Andover, for 62594 Brackenhurst Strawberry 2nd, roan, born March 28, 1924, calved April 30, 1928, bred by Sir William Hicking, Bart., Brackenhurst Hall, Southwell; s. Royal Ringleader 166746, d. 1034 Grendon Strawberry by Lord Nottingham 116317.
1157 R. N.—H. A. BROWN, for Etta Wild Eyes 4th.
H. C.—1180.
1162, 1178, 1205 Cup.—SIR WILLIAM HICKING, BART., for Brackenhurst Jean, Overpeover Fragrance, and Biddestone Flowergirl.
1157, 1158, 1173 R. N. for Cup.—H. A. BROWN, for Etta Wild Eyes 4th, Grendon Pippy, and Grendon Ursula.

Class 146.—Dairy Shorthorn Cows (in-milk), born on or after April 1, 1924, having yielded a minimum of 5,500 lb. of milk during a lactation period of 315 days.

- 1184 I. (£15, & R. N. for Champion).—LT.-COL. R. MOSTYN-OWEN, D.S.O., Woodhouse, Oswestry, for 65405 Daisy 12th, roan, born Sept. 12, 1924, calved May 31, 1928; s. Grendon Beau Brummel 172150, d. Biglands Daisy 10th by Biglands Rambler 124312.
1178 II. (£10).—SIR WILLIAM HICKING, BART., Brackenhurst Hall, Southwell, Notts, for 66066 Overpeover Fragrance, roan, born April 20, 1924, calved May 27, 1928, bred by J. G. Peel, Peover Hall, Knutsford, Cheshire; s. Humourist 172577, d. Loobagh Fragrance by Puddington Beau 3rd 132908.
1191 III. (25).—CAPT. ARNOLD S. WELLS, Thornby Hall, Northampton, for 69516 Thornby Duchess Uran 3rd, red and little white, born July 4, 1924, calved June 4, 1928; s. Thornby Exchequer 176718, d. 9289 Thornby Duchess Cran by Thornby Pioneer 133922.
1193 IV. (24).—THE MARQUESS OF ZETLAND, K.T., Aske, Richmond, Yorks, for 67898 Nora, roan, born Sept. 24, 1924, calved May 14, 1928, bred by J. W. Stephenson, Pikestone, Butter Knowle; s. Butterfly Champion 179108, d. 28072 Barney Ruby by Duthie's Aristocrat 2nd 155520.
1175 V. (23).—G. P. GOLDEN, Eaglesfield, Leire, Rugby, for 61729 Lady Doreen 16th, red and little white, born Sept. 27, 1924, calved June 1, 1928; s. Lord Leicester 9th 164968, d. Lady Doreen by Gilmorton Lad 131183.
1185 R. N.—LT.-COL. R. MOSTYN-OWEN, D.S.O., for Rednal Celia 3rd.
H. C.—1173, 1176.

Class 147.—Dairy Shorthorn Heifers (in-milk to first calving), born on or after April 1, 1925.⁴

- 1219 I. (£15).—EUSTACE ABEL SMITH, Longhills, Lincoln, for 79547 Longhills Darlington 5th, red, born Sept. 15, 1925, calved June 21, 1928; s. Sorbrook Summertime 194227, d. 55069 Longhills Darlington 3rd by Babraham Lord Price 140574.

¹ Perpetual Silver Challenge Cup, given through the Dairy Shorthorn Association, for the best group of three Cows or Heifers, by the same sire. A small replica of the Cup will be given to the owner of the winning sire, and £1 to the owner of each animal in the winning group. The sire must be living in the British Isles, and have produced living progeny in 1928.

² Champion Prize of £10, given by the Shorthorn Society, for the best Cow or Heifer. A Silver Medal is given by the Shorthorn Society to the Breeder of the Champion Dairy Shorthorn Cow.

³ Silver Challenge Cup, given through the Dairy Shorthorn Association, for the best group of three Cows or Heifers.

⁴ Prizes, except Fourth and Fifth, given by the Dairy Shorthorn Association.

c *Awards of Live Stock Prizes at Nottingham, 1928.*

- 1220 II. (£10).—EUSTACE ABEL SMITH, for 79549 Longhills Priceless Heather, white, born July 2, 1925, calved June 28, 1928; s. Babraham Lord Price 140574, d. Heather Queen by Dairyman 125081.
- 1212 III. (£5).—HOBBS & DAVIS, Kelmescott, Lechlade, for 74962 Kelmescott Melody 73rd, red and white, born May 25, 1925, calved June 3, 1928, bred by R. W. Hobbs & Sons, Ltd., Kelmescott; s. Kelmescott Imperialist 82nd 190999, d. 25444 Melody 50th by Kelmescott Acrobat 4th 126217.
- 1229 IV. (£4).—CAPT. ARNOLD S. WILLS, Thornby Hall, Northampton, and Middleton House, Andover, for 79199 Houghton Julia, roan, born May 4, 1925, calved March 29, 1928, bred by A. Russell-Smith, North Houghton Manor, Stockbridge, Hants; s. Cornerstone 170566, d. Houghton Honeysuckle by Marden Conqueror 150381.
- 1205 V. (£3).—SIR WILLIAM HICKING, BART., Brackenhurst Hall, Southwell, Notts, for 77359 Biddestone Flowergirl, roan, born Oct. 7, 1925, calved March 21, 1928, bred by F. W. Morley, Biddestone Manor, Chippenham; s. Loobagh Duke 3rd 157324, d. 1522 Thurnham Foggathorpe by Loobagh Lord Foggathorpe 143640.
- 1227 R. N.—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., Eaton Hall, Chester, for Eaton Dinah 3rd.
H. C.—1198, 1226, 1230.

Lincolnshire Red Shorthorns.

Class 148.—Lincolnshire Red Shorthorn Bulls, born in or before 1925.

- 1237 I. (£15, & R. N. for Champion.¹)—WILLIAM GRANT, Skinnand Manor, Navenby, Lincoln, for Manor Champion 18707, born March 2, 1922, bred by R. J. Tonge, Stragglethorpe, Newark; s. Sturton Archer 17005, d. Manor Eve by Bonby Tourist 10507.
- 1239 II. (£10).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Cropwell Emperor 20226, born Feb. 9, 1925; s. Harlaxton Balancer 17603, d. Bingham Violet by Anderby Clipper 13138.
- 1234 III. (£5).—ALLEN & ORR, LTD., Owicotes Farm, Heath, Chesterfield, for Anwick Brutus 2nd 20964, born Jan. 4, 1925, bred by C. Bembridge, Walcott, Lincoln; s. Scampton Vic 16896, d. Navenby Anwick 3rd by Scampton Sandow 13838.
- 1235 R. N.—WILLIAM A. BUCHANAN, The Hollies, Watnall, Nottingham, for Skinnand Showman.

Class 149.—Lincolnshire Red Shorthorn Bulls, born in 1926.

- 1243 I. (£15, & Champion.¹)—H. GORE BROWNE, Broombriggs, Woodhouse Eaves, Loughborough, for Saltfleet Waterloo 22442, born May 1, bred by T. H. B. Freshney, Worlaby, Brigg; s. Kirmington Ascent 6th 20471, d. Saltfleet Mona by Scampton Quality 11912.
- 1246 II. (£10).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Cropwell Baronet 22068, born July 4; s. Harlaxton Balancer 17603, d. Bingham Violet by Anderby Clipper 13138.
- 1242 III. (£5).—HIS MAJESTY THE KING, Sandringham, for Hundleby Gunner 22258, born March 13, bred by Benjamin Robinson, The Beeches, Hundleby, Spilsby; s. Utterby Redcoat 1st 19925, d. Harrington Dewdrop by William of Hallington 10362.

Class 150.—Lincolnshire Red Shorthorn Bulls, born in 1927.

- 1248 I. (£15).—BRIG.-GEN. C. G. HOARE, C.M.G., C.B.E., Limber Hill, Habrough, Lincs, for Barnoldby Bounce 2nd 22735, born May 19, bred by A. C. Burkinshaw, Park House, Hatcliffe, Grimsby; s. Wolferton Bouncer 19055, d. Barnoldby Coral by Langton Grange Forager 12676.
- 1250 II. (£10).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Cropwell Major 22848, born April 30; s. Cropwell Prince 20229, d. Cropwell Lady by Flawborough Marquis 15444.
- 1247 III. (£5).—WILLIAM G. HEYMANN, The Manor, Long Clawson, Melton Mowbray, for Cropwell James 22847, born Jan. 17, bred by Butler Smith, The Fields, Cropwell Butler; s. Harlaxton Balancer 17603, d. Cropwell Sherwood by Soigneo Fashion 14870.
- 1249 R. N.—ROBINSON & SON, Anderby, Alford, for Anderby Meltoni.

Class 151.—Lincolnshire Red Shorthorn Cows or Heifers (in-milk), born in or before 1925.²

- 1260 I. (£15).—E. S. TANSLEY, Bramecote Hills, Bramecote, Nottingham, for Poolham Iolanthe (Vol. 28, p. 290), born April 11, 1921, calved Jan. 7, 1928, bred by J. W. Bell, Poolham Hall, Horncastle; s. Kirmington Ruby King 55th 15585, d. Poolham Fuchsia by Scampton Regent 12876.
- 1259 II. (£10).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Harlaxton Dingle (Vol. 30, p. 392), born July 10, 1923, calved June 28, 1928, bred by W. A. Harrison, Harlaxton, Grantham; s. Cockerington Anderby 16282, d. Thurlaston Doreen 2nd by Pendley Result 13748.

¹ Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association, for the best Bull.

² Prizes given by the Lincolnshire Red Shorthorn Association.

1250 III. (25).—BENJAMIN GEORGE BOWSER, Soothern Manor, Lincoln, for Soothern Mystic (Vol. 28, p. 303), born May 26, 1918, calved May 13, 1928; s. William of Hallington 10362 d. by Scampton King Hal 7119.

1255 R. N.—BENJAMIN GEORGE BOWSER, for Soothern Mistress 3rd.

Class 152.—Lincolnshire Red Shorthorn Cows (in-milk), born in or before 1923, showing the best milking properties.

1265 I. (215, & Champion.)—JOHN EVENS & SON, Burton, Lincoln, for Burton Irene 2nd (Vol. 28, p. 377), born April 10, 1921, calved June 13, 1928; s. Burton Cherry King 15245, d. Sudbrooke No. 157 C by Pendley Sudbrooke 7809.

1273 II. (210, & R. N. for Champion.)—F. RUSSELL WOOD, Bendish House, Welwyn, Herts, for Bendish Sunbeam 6th (Vol. 28, p. 297), born Dec. 20, 1921, calved May 16, 1928, bred by S. Blundell, Green Gore, Battle; s. Bendish Seaman 7th 15814, d. Bendish Sunbeam 4th by King of the Burtons 10020.

1263 III. (25).—BENJAMIN GEORGE BOWSER, Soothern Manor, Lincoln, for Soothern Jessie 6th (Vol. 30, p. 294), born May 1, 1923, calved May 25, 1928; s. Welbourn Surprise 15018, d. Soothern Jessie 2nd by Scampton Soothern 14840.

1202 IV. (24).—BENJAMIN GEORGE BOWSER, for Soothern Dorothy (Vol. 30, p. 293), born Oct. 14, 1919, calved June 24, 1928, bred by the late J. Bowser, Frithville, Boston; s. Scampton Wainfleet 14842, d. Wainfleet Fairy 8th by Scampton Marvel 8517.

1261 V. (23).—BENJAMIN GEORGE BOWSER, for Soothern Betty 5th (Vol. 29, p. 282), born April 4, 1922, calved May 31, 1928; s. Welbourn Surprise 15018, d. Soothern Betty by Scampton King 7116.

1267 R. N.—JOHN EVENS & SON, for Burton Vic 19th.

Class 153.—Lincolnshire Red Shorthorn Cows or Heifers (in-milk), born in or after 1924, showing the best milking properties.²

1277 I. (215).—JOHN EVENS & SON, Burton, Lincoln, for Tilton Acolish 5th (Vol. 31, p. 379), born in June, 1924, calved June 11, 1928, bred by A. Holm, Tilton, Leicester; s. Tilton Marquis 18142, d. Tilton Acolish by Granthorpe Cockle 9th 13490.

1275 II. (210).—BENJAMIN GEORGE BOWSER, Soothern Manor, Lincoln, for Soothern Mystic 4th (Vol. 32, p. 279), born June 14, 1924, calved June 14, 1928; s. Soothern Fearless 18851, d. Soothern Mystic by William of Hallington 10362.

1278 III. (25).—H. C. HOLM, The Grange, Carlton Curlien, Leicester, for Curlien Lily 10th (Vol. 31, p. 382), born March 6, 1924, calved May 10, 1928, bred by H. C. and J. Holm, Carlton Curlien; s. Wolferton Nailer 17156, d. Curlien Lily 6th by Burton Duke 2nd 10538.

1276 R. N.—JOHN EVENS & SON, for Burton Fillpail 8th.

Class 154.—Lincolnshire Red Shorthorn Heifers, born in 1926.

1282 I. (215, & Champion.)—C. DE PARAVICINI, Birkholme Manor, Corby, Grantham, for Beacon Hill Agnes 1st (Vol. 32, p. 421), born April 2; s. Cockerington Anderby 16282, d. Beacon Hill Lily by Croxton Ruby 63rd 11482.

1285 II. (210, & R. N. for Champion.)—WILLIAM GRANT, Skinnand Manor, Navenby, Lincoln, for Skinnand Empress 5th (Vol. 33, p. 320), born March 28; s. Kirmington Noble 16605, d. Wootton Empress by Scampton Luxury 7884.

1283 III. (25).—C. DE PARAVICINI, for Beacon Hill Agnes 9th (Vol. 32, p. 422), born March 12; s. Cockerington Anderby 16282, d. Pendley Duchess 3rd by Scampton King of the Rubies 7122.

1288 IV. (24).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Cropwell Alice 3rd (Vol. 32, p. 464), born March 24; s. Cropwell Balancer 19291, d. Cropwell Alice by Risby General 16826.

1281 R. N.—ALLEN & ORR, LTD., Owlicotes Farm, Heath, Chesterfield, for Owlicotes Riby 3rd.

Class 155.—Lincolnshire Red Shorthorn Heifers, born in 1927.

1301 I. (215).—BUTLER SMITH, The Fields, Cropwell Butler, Nottingham, for Cropwell Violet 2nd (Vol. 33, p. 408), born Feb. 7; s. Cropwell Prince 20229, d. Cropwell Violet by Harlaxton Balancer 17603.

1292 II. (210).—JOHN W. BELL, Poolham Hall, Horncastle, for Poolham Olga, born April 18; s. Thurlaston Brigadier 18133, d. Poolham Jenny (Vol. 29, p. 264) by Kirmington Ruby King 55th 15585.

1302 III. (25).—EDWARD JAMES TURTON, Horkstow, Barton-on-Humber, for Horkstownian Wallflower, born June 27; s. Gorse Anderby 2nd 19433, d. Imperial Redcoat (Vol. 24, p. 253) by Kirmington Ruby King 32nd 13632.

1295 IV. (24).—C. DE PARAVICINI, Birkholme Manor, Corby, Grantham, for Beacon Hill Emd (Vol. 33, p. 372), born Feb. 23; s. Cockerington Anderby 16282, d. Beacon Hill Lily by Croxton Ruby 63rd 11482.

1291 V. (23).—ADMIRAL EARL BEATTY, Brooksby Hall, Leicester, for Brooksby Wanton D6, born Jan. 2; s. Welbourne Freemason 3rd 19017, d. Brooksby Wanton D (Vol. 27, p. 382) by Normanby Radiance 10902.

¹ Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association, for the best Female of the Dairy type.

² Prizes given by the Lincolnshire Red Shorthorn Association.

³ Champion Silver Cup, given by the Lincolnshire Red Shorthorn Association, for the best Female other than Dairy type.

South Devons.

Class 156.—*South Devon Bull, born in or before 1926.*

- 1304 I. (£15, & Champion.)¹—S. EVERY & SON, Tinnell, Landulph, Hatt, Cornwall, for Lixton Councillor 5th 8590, born Jan 24, 1919, bred by S. Horton, Lixton, Loddswell, Devon; s. Councillor 12th 4823, d. Molly 24th 12764 by Norman 3510.
 1305 II. (£10.)—LORD MILDMAY OF FLETE, Ermington, Devon, for Court Perfection 10632, born April 30, 1923, bred by Walter Trant, Diptford Court, South Brent; s. Myrtlegrove 2nd 8653, d. Myrtle 2nd 22323 by Worswell Perfection 6330.
 1303 III. (£5.)—RICHARD WILLIAM CHAFFE, Worswell Barton, Revelstoke, South Devon, for Wood Pride 10975, born Nov. 11, 1923, bred by A. R. T. Luscombe, Wood Barton, Loddswell, Devon; s. Manor Laddie 9887, d. Biddy 10th 23392 by Barton Pines Ketchup 6940.

Class 157.—*South Devon Bulls, born in 1927.*

- 1307 I. (£15, & R. N. for Champion.)¹—MAJOR H. R. FOX, South Battisborough, Holbeton, Devon, for Battisborough Peter, born Jan 2; s. Victor 10951, d. Rose 3rd 26756 by Battisborough Perfection 9633.
 1309 II. (£10.)—JOHN WAKEHAM, Rowden, Newton Ferrers, Devon, for Rowden Alderman 12 12117, born April 13; s. Manor Alderman 11167, d. Rowden Nellie 30725 by Painsford Eustace 9923.
 1308 III. (£5.)—LORD MILDMAY OF FLETE, Ermington, Devon, for Flete Perfection 12034, born March 21; s. Gerston King 10700, d. Flete Countess 3rd 28889 by Trehele Forester 9500.

Class 158.—*South Devon Cows or Heifers (in-milk), born in or before 1925.*

- 1312 I. (£15, & Champion.)¹—RICHARD WILLIAM CHAFFE, Worswell Barton, Revelstoke, Devon, for Worswell Gladys 16th 31008, born Jan. 28, 1925, calved Jan. 8, 1928; s. Tinnell Boy 10021, d. Worswell Gladys 12th 22757 by Widland Champion 6784.
 1310 II. (£10.)—HENRY CHAFFE, Harestone, Brixton, Devon, for Manor Primrose 2nd 28801, born May 6, 1923, calved Oct. 26, 1927, bred by W. Walke, East Allington, Devon; s. Haccombe Ruby's King 9193, d. Primrose 6th 20764 by Offields Monogram 5002.
 H. C.—1318. C.—1314.

Class 159.—*South Devon Heifers, born in 1926.*

- 1319 I. (£15.)—RICHARD WILLIAM CHAFFE, Worswell Barton, Revelstoke, Devon, for Worswell Gladys 17th 32148, born Jan. 7; s. Tinnell Boy 10021, d. Worswell Gladys 12th 22757 by Widland Champion 6784.
 1322 II. (£10.)—LORD MILDMAY OF FLETE, Ermington, Devon, for Flete Crocus 32627, born Jan. 5; s. Gerston King 10700, d. Flete Countess 3rd 28889 by Trehele Forester 9500.
 1321 III. (£5.)—MAJOR H. R. FOX, South Battisborough, Holbeton, Devon, for Prettymaid 4th 32343, born June 3; s. Victor 10951, d. Prettymaid 2nd 21351 by Berry Napoleon 6376.
 H. C.—1320.

Class 160.—*South Devon Heifers, born in 1927.**

- 1326 I. (£15.)—LORD MILDMAY OF FLETE, Ermington, Devon, for Flete Princess 2nd 33452, born Jan. 4; s. Gerston King 10700, d. Flete Princess 30308 by Trehele Forester 9500.
 1325 II. (£10.)—MAJOR H. R. FOX, South Battisborough, Holbeton, Devon, for Rosemary, born May 6; s. Victor 10951, d. Rose 3rd 26756 by Battisborough Perfection 9633.

Red Polls.

Class 161.—*Red Poll Bulls, born in or before 1925.*

- 1334 I. (£15, & Champion.)²—E. & B. MOORE, Home Farm, Somerleyton, Suffolk, for Gaddesby Gauntlet 12620, born Aug. 11, 1921, bred by Captain J. O. Sherrard, Gaddesby, Leicester; s. Sudbourne Loyalist 11814, d. 27168 Necton Gillflower by Shrewsbury 10480.
 1332 II. (£10, & R. N. for Champion.)³—N. A. HEYWOOD, Glevering Park, Easton, Wickham Market, for Easton Pilgrim Father 12597 born May 5, 1922, bred by the Marchioness of Graham, Easton Park, Wickham Market; s. Easton Aristocrat 11621, d. 20786 Mayflower by Bearer 9331.
 1329 III. (£5.)—THOMAS BROWN & SON, Marham Hall, King's Lynn, for Royal Crimson 11763, born Oct. 28, 1919, bred by His Majesty the King, Sandringham; s. Sudbourne Crimson 11222, d. 25094 Gressenhall Rubina by Unique 10370.
 1336 R. N.—HENRY TAYLOR, Lower Tundridge, Suckley, Worcester, for Byley Hero.
 H. C.—1333.

¹ Silver Challenge Cup given by the South Devon Herd Book Society for the best Bull.

² Silver Challenge Cup given by the South Devon Herd Book Society for the best Cow or Heifer.

³ Prizes given by the South Devon Herd Book Society.

⁴ Champion Prize of £5, given by the Red Poll Cattle Society, for the best Bull.

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Class 162.—Red Poll Bulls, born in 1926.

- 1340 I. (£15).—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for Yoxford Ronald 14393, born Feb. 27; s. Sharnden Ronald 12431, d. 27233 Sharnden Primrose by Kimberley 10881.
 1338 II. (£10).—J. P. ARKRIGHT, Hatton House, Warwick, for Hatton Faber 14151, born Sept. 14; s. Colworth David 11593, d. 24035 Hatton Fable by Acton Hussar 9881.
 1387 III. (£5).—HIS MAJESTY THE KING, Sandringham, for Royal Rambler 14298, born Jan. 17; s. Tittleshall Admiral 12464, d. 33093 Royal Ruth 2nd by Easton Autocrat 11624.
 1341 R. N.—LT.-COL. C. HEYWORTH-SAVAGE, Bradwell Grove, Burford, Oxford, for Bradwell Dragoon.

Class 163.—Red Poll Bulls, born in 1927.

- 1350 I. (£15).—E. & B. MOORE, Home Farm, Somerleyton, Suffolk, for Lichfield Red Gauntlet, born May 18; s. Gaddesby Gauntlet 12620, d. 27982 Lichfield Peardrop by Lichfield Roger 10759.
 1345 II. (£10).—MRS. R. M. FOOT, White Hill, Berkhamsted, Herts, for White Hill Surtees, born Feb. 13; s. Meddler Full Cry 13138, d. 30569 White Hill Bluebelle by Sudbourne Hector 11224.
 1343 III. (£5).—HIS MAJESTY THE KING, Sandringham, for Royal Whisperer, born Jan. 23; s. Whiteway Whisperer 13615, d. 33079 Royal Ardentia by Royal Brigadier 12411.
 1354 IV. (£4).—LT.-COL. C. E. TURNER, Old Down, Tockington, Bristol, for Oldown Faultless Guide 2nd, born Jan. 28; s. Oldown Faultless 13168, d. 33012 Oldown Guiding Star by Plumstead Pilgrim 11754.
 1355 V. (£3).—LORD WAVERETREE, Horsley Hall, Gresford, North Wales, for Horsley Soarer, born Feb. 21; s. Sudbourne Redwald 12847, d. 29544 Ashmoor Penguin by Davyson 863rd 11926.
 1352 R. N.—OWEN H. SMITH, Langham, Oakham, for Ranksborough Herdsman.
 H. C.—1348.

Class 164.—Red Poll Cows (in-milk), born in or before 1922.

- 1359 I. (£15).—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for 30347 Royal Mavis, born Jan. 26, 1921, calved June 1, 1928, bred by His Majesty the King, Sandringham; s. Royal Sunshine 11452, d. 25745 Lady Marie by Honingham Alcester 10424.
 1365 II. (£10).—LORD WAVERETREE, Horsley Hall, Gresford, North Wales, for 30252 Neeton Enid 2nd, born Sept. 30, 1921, calved May 23, 1928, bred by the late R. Harvey Mason, Neeton Hall, Swaffham; s. Sudbourne Croesus 10927, d. 23005 Ena by Aviator 9995.
 1361 III. (£5).—MAJOR J. A. MORRISON, D.S.O., Basildon Park, Reading, for 29582 Basildon Comfit, born May 9, 1921, calved Jan. 16, 1928; s. Sudbourne Miner 11492, d. 25965 Sudbourne Comfit by Sudbourne Credit 10796.
 1363 IV. (£4).—MAJOR J. A. MORRISON, D.S.O., for 31739 Springhill Artless, born Jan. 29, 1922, calved May 7, 1928, bred by Lt.-Col. E. D. Miller, The Farm, Springhill, Rugby; s. Ashmoor Carnation 11858, d. 26614 Ashmoor Artist by Potsherd 11189.
 1358 R. N.—MRS. R. M. FOOT, White Hill, Berkhamsted, Herts, for White Hill Molly.
 H. C.—1360.

Class 165.—Red Poll Cows or Heifers (in-milk), born in 1923, 1924, or 1925.¹

- 1367 I. (£15, & Champion*).—LT.-COL. SIR MERRIE R. BURRILL, BART., C.B.E., Knepp Castle Estate Office, Horsham, for 32750 Knepp Madge 3rd, born Sept. 5, 1923, calved June 11, 1928; s. Knepp Crown 11162, d. 27968 Knepp Madge by Sudbourne Beacon 10919.
 1368 II. (£10).—VISCOUNT FOLKESTONE, Longford Castle, Salisbury, for 32828 Longford Symphony, born April 21, 1923, calved April 26, 1928; s. Sudbourne Choice Goods 12455, d. 28000 Longford Melody by Longford Reflection 11028.
 1378 III. (£5).—E. & B. MOORE, Home Farm, Somerleyton, Suffolk, for 34330 Lichfield Lucy 6th, born Feb. 15, 1924, calved March 31, 1928; s. Gaddesby Gauntlet 12620, d. 27072 Lichfield Lucy by Lichfield Roger 10759.
 1371 IV. (£4).—N. A. HEYWOOD, Glevering Park, Easton, Wickham Market, for 32489 Glevering Falcon, born Sept. 14, 1923, calved Jan. 1, 1928; s. Easton Alyssum 11620, d. 26415 Orion of Sedgemere by Kirton Baron 10748.
 1374 R. N.—MAJOR J. A. MORRISON, D.S.O., Basildon Park, Reading, for Colworth Hyacinth 2nd.

Class 166.—Red Poll Heifers, born in 1926.

- 1384 I. (£15, & R. N. for Champion*).—A. PRESTON JONES, Mickleover House, Derby, for 38574 Upton Enid, born Jan. 21, bred by W. L. Horbury, Ditchford Farm, Moreton-in-Marsh; s. Hatton Fabulist 11985, d. 30251 Neeton Emma by Sudbourne Croesus 10927.
 1387 II. (£10).—VISCOUNT TREDEGAR, Tredegar Park, Newport, Mon., for 38536 Tredegar Donna, born May 25; s. Tredegar Bramble 13596, d. 31741 Sprowston Belladonna by Barwick Eagle 11553.

¹ Prizes, except Fourth, given by the Red Poll Cattle Society.

* Champion Prize of £5, given by the Red Poll Cattle Society, for the best Cow or Heifer

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- 1382 III. (25).—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for 38714 Yoxford Beryl, born April 4; s. Knepp Grenadier 13467, d. 27962 Knepp Beryl by Harefield Bestman 10989.
 1380 IV. (24).—MRS. DOROTHY GARDNER, Blackmore House, Brentwood, for 38182 Peadowns Beauty, born Feb. 17, bred by the late Walter Hill, Bearmaine, South Hanningfield, Chelmsford; s. Boulge Pharaoh 12583, d. 30289 Peldon Bellona 2nd by Bantaskin Monster 11267.
 1377 R. N.—HIS MAJESTY THE KING, Sandringham, for Royal Crystal Rose.
 H. C.—1378, 1379. C.—1383.

Class 167.—Red Poll Heifers, born in 1927.

- 1396 I. (215).—N. A. HEYWOOD, Glevering Park, Easton, Wickham Market, for Glevering Coot, born Jan. 11; s. Easton Pilgrim Father 12597, d. 28621 Combs Crocus 3rd by Sudbourne Hero 11231.
 1392 II. (210).—VISCOUNT FOLKESTONE, Longford Castle, Salisbury, for Longford Flower, born Jan. 23; s. Bredfield Fearboy 2nd 13874, d. 34352 Longford Bloom by Sudbourne Choice Goods 12455.
 1388 III. (25).—HIS MAJESTY THE KING, Sandringham, for Royal Fairy 2nd, born Jan. 13; s. Royal Crimson 11763, d. 29839 Finborough Fancy 2nd by Shadwell Strong Boy 11773.
 1397 IV. (24).—LT.-COL. C. HEYWORTH-SAVAGE, Bradwell Grove, Burford, Oxford, for Bradwell Peppercorn, born March 29; s. Bredfield Nathan 12945, d. 31322 Kilton Pepperette by Sudbourne Forerunner 11491.
 1389 V. (23).—THOMAS BROWN & SON, Marham Hall, King's Lynn, for Marham Sea Mink, born Jan. 21; s. Marham Palmerston 13497, d. 30204 Marham Seamoss by Marham Panther 11412.
 1395 E. N.—SIR HERBERT HAMBLING, BART., Rookery Park, Yoxford, Suffolk, for Yoxford Primrose.
 H. C.—1401. C.—1391, 1393.

Blue Albions.

Class 168.—Blue Albion Bulls, born in or before 1925.

- 1406 I. (215, & R. N. for Champion.¹)—HENRY MATTHEWS, Down Farm, Winterbourne, Bristol, for Broomhill Threshold 499, born March 31, 1923, bred by Major Gerald Johnson, D.S.O., Foston, Derby; s. Mountain King 81, d. Broomhill Amber 1072.
 1404 II. (210).—LT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Bank Champion 183, born July 23, 1921, bred by G. W. Axe, Demonsdale Farm, Ashover, Chesterfield; s. Bank Baron 1, d. Bank Marlon 68.
 1403 III. (25).—ARNOLD GILLET, Ridgewood, Chorley, Lancs, for Ridgewood Romeo 1083, born Nov. 11, 1924; s. Bradbourne Showman 235, d. Bradbourne Moreen 2512.

Class 169.—Blue Albion Bulls, born in 1926.²

- 1408 I. (215, & Champion.¹)—T. H. CALDERBANK, The Hall, Stow Maries, Chelmsford, for Stow Manners 1579, born Sept. 12; s. Hazleigh Prince 611, d. Sulphan Julia 8164.
 1410 II. (210).—ARNOLD GILLET, Ridgewood, Chorley, Lancs, for Ridgewood Ring 1555, born Aug. 4; s. Bradbourne Guardsman 451, d. Bradbourne Peace 2528.
 1411 III. (25).—A. T. GREENSLADE, Little Walden Park, Saffron Walden, for Walden Generosity 1591, born Nov. 10; s. Bradbourne Orion 887, d. Ridgewardine Deepest 6388.
 1409 E. N.—MISS M. G. M. COUSENS, Sutton Benger, Chippenham, for Avon Colonel.

Class 170.—Blue Albion Bulls, born in 1927.²

- 1418 I. (215).—RANDOLPH TORY, Charlsworth Manor, Blandford, for Cowlease Champion, born Feb. 25, bred by Mrs. Tory, Charlsworth, Blandford; s. Charlsworth Blue Boy 938 d. Cliftonthorpe Lady 2nd 8524.
 1417 II. (210).—T. H. SWIRE & SONS, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for Mount Fearless, born April 16; s. Fernilee Fearless 303, d. Mount Polly 5154.
 1413 III. (25).—PERCY DOBSON, Manor Farm, Ridgwardine, Market Drayton, for Ridgwardine Champion, born June 8; s. Elton Monarch 301, d. Ridgwardine Tulp 8884 by Mountain Wildman 85.
 1414 E. N.—PERCY DOBSON, for Ridgwardine Romeo.
 H. C.—1419.

Class 171.—Blue Albion Cows or Heifers (in-milk), born in or before 1925.

- 1420 I. (215, & Champion.³)—PERCY DOBSON, Manor Farm, Ridgwardine, Market Drayton, for Anderson Cornflower 1580, breeder and age unknown, calved June 25, 1928.

¹ Perpetual Silver Challenge Cup, given by the Blue Albion Cattle Society, for the best Bull.

² Prizes given by the Blue Albion Cattle Society.

³ Perpetual Silver Challenge Cup, given by the Blue Albion Cattle Society, for the best Cow or Heifer.

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- 1428 II. (#10).—T. H. SWIRE & SONS, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for Mount Kitty 5112, breeder and age unknown, calved June 21, 1928.
 1427 III. (#5).—B. W. SMITH, Pledgdon Hall, Henham, Stansted, Essex, for Elsenham Patricia 4148, age unknown, calved June 3, 1928, bred by Bennett & Son, Ongar, Essex.

Class 172.—Blue Albion Heifers, born in 1926.

- 1433 I. (#15, & E. N. for Champion).¹—LT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Eardswick Derby 11140, born Jan. 10, bred by S. M. Irving, Eardswick Hall, Middlewich; s. Eardswick Cropper 579, d. Eardswick Chevroley 3976.
 1435 II. (#10).—B. W. SMITH, Pledgdon Hall, Henham, Stansted, Essex, for Elsenham Dorothy 11170, born Jan. 8; s. Bearstone Topper 209, d. Elsenham Rose 4158.
 1429 III. (#5).—FERCY DOBSON, Manor Farm, Ridgwardine, Market Drayton, for Ridgwardine Daisy 2nd 11428, born June 21; s. Ridgwardine Chief 723, d. Ridgwardine Daisy 6370.
 1431 E. N.—LT.-COL. W. E. HARRISON, for Barton Lilac 2nd.
 C.—1434.

Class 173.—Blue Albion Heifers, born in 1927.

- 1438 I. (#15).—ARNOLD GILBERT, Ridgewood, Chorley, Lancs, for Ridgewood Rhyme, born May 7; s. Ridgewood Romeo 1083, d. by Bradbourne Alethea 8362.
 1437 II. (#10).—T. H. CALDERBANK, The Hall, Stow Maries, Chelmsford, for Stow Joan, born Aug. 21; s. Broomhill Threshold 499, d. Bulphan Pride 9274 by Stanton Premium 175.
 1444 III. (#5).—B. W. SMITH, Pledgdon Hall, Henham, Stansted, Essex, for Elsenham Ena, born Feb. 18; s. Ridgwardine Chief 723, d. Elsenham Beatrice 4104.
 1440 IV. (#4).—LT.-COL. W. E. HARRISON, Wychnor Park, Burton-on-Trent, for Barton Iris, born Feb. 7; s. Bank Champion 183, d. Park Iris 5820.
 1446 E. N.—T. H. SWIRE & SONS, The Mount and Bellaport Farms, Norton-in-Hales, Market Drayton, for Mount Faithful 3rd.
 E. C.—1441. C.—1439.

British Friesians.

The letters F.R.S. after the number of an animal indicate that such animal is registered in the Friesch Rundvee Stamboek (Friesland Cattle Herd Book) Zwartebonte (Black and White) Section.

The letters F.H.B., S.A., after the number of an animal indicate that such animal is registered in the Friesland Herd Book, South Africa.

The letters S.A.S.B. after the name of an animal indicate that such animal is registered in the South African Stud Book.

The letters P.I. after the name of an animal indicate that such animal is of pure imported Friesian (Holland) or South African blood.

Unless otherwise stated the numbers refer to the British Friesian Herd Book.

Class 174.—British Friesian Bulls, born in or before 1925.

- 1451 I. (#15, & Champion).²—THE EXORS. OF EDWARD HOLLINGWORTH, Moordale, Dobocross Yorks, for Hache Buringa 25871 P.I., born Jan. 15, 1924, bred by the Hache Herd Muntham Home Farm, Findon, Worthing; s. Hache Cerjan Ulysses 14165 P.I., d. Clockhouse Vic-Rinze 87868 P.I. by Clockhouse (imp.) Vic Wouter 3691.
 1447 II. (#10).—P. L. R. ALLEN, The Buglawton Herd, Congleton, Cheshire, for Hache Bacchus 25841 P.I., born March 27, 1924, bred by the Hache Herd, Muntham Home Farm, Findon, Worthing; s. Clockhouse King Akirin 11321 P.I., d. Seaton Johanna 80858 P.I. by Dunnald (imp.) Cesar 2nd 3818.
 1455 III. (#5).—WALTER B. ROBINSON, Elmercroft, Seawby, Brigg, for Lamcote Yne's Chief 23411 P.I., calved Feb. 8, 1923, bred by Lt.-Col. C. W. Birkin, C.M.G., Lamcote, Radcliffe-on-Trent; s. Creakeld (imp. 1922) Chief 19709, d. Lamcote (imp. 1922) Yne 1st 69384 by Craigie Marthus 4th 82 F.H.B., S.A.
 1457 IV. (#4).—ALBERT WRIGHTMAN, Middle Herrington Farm, Sunderland, for Herrington Footprint 23893, born March 29, 1925; s. Brooklands Yute 11145, d. Herrington Bouquet 53586 by Terling Dutchman 5643 P.I.
 E. C.—1452, 1453.

Class 175.—British Friesian Bulls, born on or between January 1 and June 30, 1926.

- 1458 I. (#15).—EDWIN ARTHUR GOODMAN, Lower Court, Chadlington, Charlbury, Oxon, for Iken Pel Beatty 19th 31241, born Jan. 18, bred by Stuart Heaton, Poplar Farm, Iken, Tunstall; s. Iken (imp. 1922) Pel Beatty 23201, d. Terling Total Eclipse 10th 49288 by Beccles (imp.) Lodewijk 3501.
 1460 II. (#10).—THE TRUSTEES OF SIR ALASDAIR W. MACROBERT, BART., Douneside, Tarland, Aboyne, Aberdeenshire, for Douneside Pel Klaas 30901 P.I., born March 30; s. Hache Apollo 22925 P.I., d. Tarvin Hatsumer 2nd 31076 P.I. by Tarvin (imp.) Pel Klaas 4521.

¹ Perpetual Silver Challenge Cup, given by the Blue Albion Cattle Society, for the best Cow or Heifer.

² Champion Prize of £10, given by the British Friesian Cattle Society, for the best Bull.

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1462 III. (25).—HUBERT M. MARTINEAU, The Lodge, Holyport, Berks, for Holyport Series 31215 P.I., born Feb. 20; s. Hedges Second Series 6427 P.I., d. Holyport (imp. 1922) Martha 62654 by Kopjeskraal Walker Ordello 2108 S.A.S.B.

Class 176.—British Friesian Bulls, born on or between July 1 and December 31, 1926.

1466 I. (215, & R. N. for Champion.¹)—HUBERT M. MARTINEAU, The Lodge, Holyport, Berks, for Holyport Serynte Cesar 81217 P.I., born Nov. 1; s. Hedges Second Series 6427 P.I., d. Hache Ynsar Vaars 53114 P.I., by Kingswood (imp.) Ynte 4047.

1465 II. (210).—MAJOR FRANK HOLMES, Millhill, Sandon, Chelmsford, for Buttigreen Marthus 30803, born Sept. 24; s. Terling (imp. 1922) Marthus 21533, d. Terling Graceful 2nd 57324 by Dunnald Haeayemalschaap 7699 P.I.

1463 III. (25).—F. W. GILBERT, The Manor, Chellaston, Derby, for Chellaston Hatsumer Glad 30691 P.I., born Sept. 26; s. Mapleton Hilko's Ironclad 26511 P.I., d. Tyddyn (imp. 1922) Princess Blossom 67120 by Guildford Snowball 153 F.H.B., S.A.
H. C.—1467. C.—1464.

Class 177.—British Friesian Bulls, born on or between January 1 and June 30, 1927.²

1474 I. (215, Champion.¹ & R. N. for Champion.³)—G. B. RADCLIFFE, Pool Bank, Tarvin, Cheshire, for Tarvin Janke's Mairschaap 33525 P.I., born May 1; s. Dunnald Haeayemalschaap 7699, d. Tarvin (imp. 1922) Beatty's Janke 66574 by Nels Rust Beatty 260 F.H.B., S.A.

1470 II. (210).—LORD GLENTANAR, Glen Tanar, Aboyne, Aberdeenshire, for Glentanar Barland 32765 P.I., born June 2; s. Dell Hollander 7655 P.I., d. Northdean Barbara 74624 P.I. by Northdean (imp. 1922) Marthus Beatty 21081.

1473 III. (25).—H. & B. POOLE, Hill House, Lawford, Essex, for Lawford Gascoigne 33071, born April 23; s. Terling (imp.) Verwachting 4543, d. Lawford Trixy 46892 by Clockhouse Boterbloss 9311.
H. C.—1468.

Class 178.—British Friesian Bulls, born on or between July 1 and December 31, 1927.³

1475 I. (215).—A. NORMAN DUGDALE, Dutton Manor, Longridge, Preston, for Dutton Master Tom 32681 P.I., born Oct. 24; s. Thurston Rindol 27219 P.I., d. Thurston Karel Jeltje 87980 P.I. by Kirkhill (imp.) Karel 2nd 4051.

1480 II. (210).—HUBERT M. MARTINEAU, The Lodge, Holyport, Berks, for Holyport Marseries 32939 P.I., born Oct. 8; s. Hedges Second Series 6427 P.I., d. Holyport Marcia 88162 P.I. by Holyport (imp. 1922) Renze 2nd 20401.

1477 III. (25).—CLIFFORD W. H. GLOSSOP, The Lund Dairies, Bramwith, Doncaster, for Lund Blanche's Viking 33165 P.I., born Aug. 14; s. Hache Cerbert Viking 17107 P.I., d. Lund (imp. 1922) Blanche 22nd 64104 by Bedford Albert 5th 1870 S.A.S.B.
C.—1478.

Class 179.—British Friesian Cows (in-milk), born in or before 1922.

1488 I. (215).—LORD RAYLEIGH, Terling Place, Chelmsford, for Terling Lead 18th 57344, born Nov. 15, 1921, calved April 15, 1928; s. Tarvin Zwarte Frits 12805 P.I., d. Terling Lead 12th 31140 by Terling (imp.) Vic Bertus 4541.

1485 II. (210).—THE HACHE HERD, Muntham Home Farm, Findon, Worthing, for Hache Worth 61974 P.I., born Sept. 2, 1922, calved Jan. 27, 1928; s. Hache Cerjan Olysses 14165 P.I., d. Hache Teit 33204 P.I. by Tredegar (imp.) Prince of Holland 4579.

1481 III. (25).—P. L. R. ALLEN, Buglawton Herd, Congleton, Cheshire, for Northdean Bonnie Annie 55600, born March 21, 1921, calved June 17, 1928, bred by G. Holt-Thomas, Northdean House, Hughenden, High Wycombe; s. Dell Hollander 7655 P.I., d. Hedges Bonnie Annie 1696 by Hedges Hawkrigg Duke 293.

1483 IV. (24).—CAPT. JOHN CHRISTIE, M.C., Glyndebourne, Ringmer, Lewes, for Lohrston Nellie 3rd 54790, born July 5, 1921, calved May 10, 1928, bred by David Sinclair, Lohrston, Nigg, Aberdeen; s. Reddown (imp.) Murk 4377, d. Kirkhill Nellie 2016 by Prince of Marden.

1490 V. (23).—WALTER B. ROBINSON, Elmcroft, Scawby, Brigg, for Brigg Perfect 59416, born Sept. 3, 1922, calved May 4, 1928; s. Dunnald Kramer 13845, d. Hedges Lisette 15012 by Hedges Squire 313.

1482 E. N.—LT.-COL. CHARLES W. BIRKIN, C.M.G., Lamcote, Radcliffe-on-Trent, for Bramcote Agatha.
H. C.—1486.

¹ The "Wobaston" Silver Challenge Cup, given through the British Friesian Cattle Society, for the best Bull, bred by Exhibitor.

² Prizes given by the British Friesian Cattle Society.

³ Champion Prize of £10, given by the British Friesian Cattle Society, for the best Bull.

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Class 180.—British Friesian Cows (in-milk), born in 1923 or 1924.¹

- 1509 I. (£15, & Champion.)²—THE EXORS. OF EDWARD HOLLINGWORTH, Moordale, Dobcross, Yorks, for Hardinghall Dairymaid 72014, born Nov. 19, 1923, calved April 22, 1928, bred by Major B. M. Edwards, Hardingham Hall, Norwich; s. Clockhouse Rinkod 7513 P.I., d. Teston Silver-Lead 49332 by Terling (Imp.) Verwachting 4543.
- 1513 II. (£10.)—J. R. UPSON, Saracens, Saunders Lane, Woking, for Thurston Karel Emerald 2nd 78972, born Jan. 20, 1923, calved April 16, 1928, bred by George T. Eaton, Thurston Hall, Framfield; s. Kirkhill (Imp.) Karel 2nd 4051, d. Thurston Emerald 49372 by Coldhayes King Ferdinand 6059.
- 1505 III. (£5.)—F. W. GILBERT, The Manor, Chellaston, Derby, for Hache Amethyst 71738, born Jan. 25, 1923, calved June 11, 1928, bred by the Hache Herd, Muntham Home Farm, Findon, Worthing; s. Clockhouse King Akirin 11321 P.I., d. Hache Undine 45534 by Clockhouse King Akkebot 9327 P.I.
- 1512 IV. (£4.)—J. R. UPSON, for Northdean Princess May 2nd 85528, born March 22, 1924, calved April 5, 1928, bred by G. Holt-Thomas, Northdean, Hughenden, High Wycombe; s. Northdean (Imp. 1922) Marthus Beatty 21081, d. Northdean Princess May 56622 by Dell Hollander 7655 P.I.
- 1508 V. (£3.)—CAPT. F. F. A. HEILGERS, Wyken Hall, Bardwell, Bury St. Edmunds, for Wyken Pels Peach 2nd 89010 P.I., born May 2, 1924, calved April 30, 1928; s. Wyken (Imp. 1922) Trevor 21837, d. Wyken (Imp. 1922) Pels Peach 87770 by Bedford Pel Knoll 2nd 471 S.A.S.B.
- 1510 R. N.—BERTRAM PARKINSON, Creskeld Hall, Arthington, Leeds, for Creskeld Lotus. H. C.—1500, 1503. C.—1502.
- 1509, 1534, 1546 Cup.³—THE EXORS. OF THE LATE EDWARD HOLLINGWORTH, for Hardinghall Dairymaid, Northdean Dora 2nd, and Moordale Rijpma.
- 1512, 1513, 1574 R. N. for Cup.³—J. R. UPSON, for Northdean Princess May 2nd, Thurston Karel Emerald 2nd, and Saracens Princess.

Class 181.—British Friesian Heifers (in-milk), born in 1925.¹

- 1517 I. (£15, & R. N. for Champion.)²—CAPT. JOHN CHRISTIE, M.C., Glyndebourne, Ringmer, Lewes, for Glyndebourne Elsie 93626, born Jan. 27, calved April 19, 1928; s. Glyndebourne (Imp. 1922) Rikus 20111, d. Moss Elsie 4th 40834 by Moss (Imp.) Adema 49th 4223.
- 1518 II. (£10.)—SIR JAMES HILL, BART., Hexton Manor, Hitchin, Herts, for Knebworth Ceres Pleasant Lass 2nd 95252, born April 8, calved May 1, 1928, bred by W. and R. W. Ince, Swangley Farm, Knebworth; s. Knebworth (Imp. 1922) Ceres 2nd 20607, d. Knebworth Ynte's Pleasant Lass 46590 by Kingswood (Imp.) Ynte 4047.
- 1522 III. (£5.)—J. R. UPSON, Saracens, Saunders Lane, Woking, for Northdean Silver Queen 96992, born July 17, calved April 14, 1928, bred by G. Holt-Thomas, Northdean, Hughenden, High Wycombe; s. Dell Hollander 7655 P.I., d. Beccles Silver Queen 81880 by Beccles (Imp.) Lodewijk 3501.
- 1520 IV. (£4.)—J. R. UPSON, for Hamels Housemaid 94020, born July 29, calved April 8, 1928, bred by E. Furness, Hamels Park, Buntingford; s. Hamels Froukje's Roland 22985 P.I., d. Hamels Flidget 71816 by Seaton Roland 10593 P.I.
- 1524 R. N.—ALBERT WRIGHTMAN, Middle Herrington Farm, Sunderland, for Herrington Ynte's Frieze. H. C.—1523. C.—1519.

Class 182.—British Friesian Heifers, born on or between January 1 and June 30, 1926.

- 1535 I. (£15.)—JAMES KILPATRICK, Craigie Mains, Kilmarnock, for Craigiemains Beauty 103226 P.I., born May 3; s. Dunallan (Imp. 1922) Chepstow 19853, d. Craigiemains Belle 69934 P.I. by Glyndebourne (Imp. 1922) Rikus 20111.
- 1534 II. (£10.)—THE EXORS. OF EDWARD HOLLINGWORTH, Moordale, Dobcross, Yorks, for Northdean Dora 2nd 108472, born April 28, bred by G. Holt-Thomas, Northdean, Hughenden, High Wycombe; s. Northdean (Imp. 1922) Marthus Beatty 21081, d. Northdean Dora 64774 by Dell Hollander 7655 P.I.
- 1533 III. (£5.)—THE EXORS. OF EDWARD HOLLINGWORTH, for Moordale Viola 108090, born April 22, bred by the late Edward Hollingworth, C.B.E.; s. Hache Buringa 25871 P.I., d. Hache Viola 53110 by Clockhouse King Akirin 11321 P.I.
- 1536 IV. (£4.)—BERTRAM PARKINSON, Creskeld Hall, Arthington, Leeds, for Creskeld Hazeline 3rd 103336, born Feb. 9; s. Haydon Mazeppa 23051 P.I., d. Creskeld Hazeline 60888 by Clockhouse King Akirin 11321 P.I.
- 1538 V. (£3.)—J. R. UPSON, Saracens, Saunders Lane, Woking, for Charndon Nancy 102624, born Feb. 26, bred by C. A. Smith, Hill Farm, Charndon, Gloucester; s. Crawford (Imp. 1922) Beatty 6th 19689, d. Chaddeley Nancy 43958 by Chaddeley Jonathan 9287.
- 1540 R. N.—ALBERT WRIGHTMAN, Middle Herrington Farm, Sunderland, for Herrington Gloria. H. C.—1530, 1539, 1541. C.—1528, 1532.

¹ Prizes, except Fourth and Fifth, given by the British Friesian Cattle Society.

² Champion Prize of £10, given by the British Friesian Cattle Society, for the best Cow or Heifer.

³ Silver Challenge Cup, given through the British Friesian Cattle Society, for the best group of three Cows or Heifers.

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- 1533, 1546, 1579 Trophy.¹—THE EXORS. OF EDWARD HOLLINGWORTH, for Moordale Viola, Moordale Rijpma, and Moordale Fairmaid.
1540, 1552, 1576 R. N. for Trophy.¹—ALBERT WEIGHTMAN, for Herrington Gloria, Herrington Good Girl, and Herrington Heiress.

Class 183.—British Friesian Heifers, born on or between July 1 and December 31, 1926.

- 1546 I. (£15).—THE EXORS. OF EDWARD HOLLINGWORTH, Moordale, Dobercross, Yorks, for Moordale Rijpma 108088 P.I., born Sept. 3, bred by the late Edward Hollingworth, C.B.E.; s. Hache Buringa 25871 P.I., d. Lochlands Rijpma 73623 P.I. by Cradlehall (imp.) Hollander 2nd 3737.
1552 II. (£10).—ALBERT WEIGHTMAN, Middle Herrington Farm, Sunderland, for Herrington Good Girl 105902, born Nov. 8; s. Wychnor Jan 24645 P.I., d. Herrington Ynte's Electra 82990 by Brooklands Ynte 11145.
1549 III. (£5).—ERIC SYKES, Richings Park, Coinbrook, Bucks, for Richings Amy's Maid 109640, born July 28, bred by Friend Sykes, Richings Park; s. Kingswood King's Ceres 17563, d. Brookside Amy's Maid 20338 by Brookside Buttercup's Boy 1015.
1545 IV. (£4).—SIR JAMES HILL, BART., Hexton Manor, Hitchin, Herts, for Hexton Ynte's Milkmaid 2nd 105950, born Dec. 9; s. Masham Series Dutchman 26523, d. Knebworth Ynte's Milkmaid 40024 by Kingswood (imp.) Ynte 4047.
1542 V. (£3).—MAJOR B. M. EDWARDS, M.C., Hardingham Hall, Norwich, for Hardingham Clara 105634, born Oct. 24; s. Northdean Hollander 4th 26675 P.I., d. Eastern Clara 2nd 61054 by Inwood John Dory 14457.
1547 R. N.—JOHN HORRIDGE, Plas Llanfair, Llanfair P.G., Anglesey, for Llanfair Countess Mary.
H. C.—1550. C.—1543.

Class 184.—British Friesian Heifers, born on or between January 1 and June 30, 1927.²

- 1574 I. (£15).—J. R. UPSON, Saracens, Saunders Lane, Woking, for Saracens Princess May 120964, born Feb. 10; s. Northdean Melbloom's Beatty 26679 P.I., d. Northdean Princess May 2nd 85528 by Northdean (imp. 1922) Marthus Beatty 21081.
1567 II. (£10).—JOHN HORRIDGE, Plas Llanfair, Llanfair P.G., Anglesey, for Llanfair Neeltje 2nd 118566 P.I., born Jan. 24; s. Llanfair Paul 20755 P.I., d. Bladen (imp.) Neeltje 3rd 16942 by Ceres 4497 F.R.S.
1560 III. (£5).—ETHELBERT FURNESS, Hamels Park, Buntingford, Herts, for Hamels Junket 116908, born May 20; s. Hamels Paulus Potter 22989 P.I., d. Iken Dairymaid 4th 83346 by Iken (imp. 1922) Fel Beatty 23201.
1576 IV. (£4).—ALBERT WEIGHTMAN, Middle Herrington Farm, Sunderland, for Herrington Heiress 117202, born June 24; s. Wychnor Jan 24645 P.I., d. Berwick Ringlet 59084 by Tyneside (imp.) Janus 4591.
1565 V. (£3).—SIR JAMES HILL, BART., Hexton Manor, Hitchin, Herts, for Hexton Flossie 117236, born Feb. 19; s. Hexton Hollander 28851, d. Blofeld Flossie 68694 by Kingswood Sir Kalma 8139.
1573 R. N.—C. ARTHUR SMITH, Hill Farm, Charndon, Leicester, for Parkwyche Tripod 120064.
H. C.—1557, 1568. C.—1563, 1572.

Class 185.—British Friesian Heifers, born on or between July 1 and December 31, 1927.²

- 1581 I. (£15).—THE TRUSTEES OF SIR ALASDAIR W. MACROBERT, BART., Douneside, Tairland, Aboyne, Aberdeenshire, for Douneside Maripose 115330, born Aug. 26; s. Lochlands Hollander 29235 P.I., d. Douneside Maris 02536 by Douneside Hazeumerschapp 13710 P.I.
1579 II. (£10).—THE EXORS. OF EDWARD HOLLINGWORTH, Moordale, Dobercross, Yorks, for Moordale Fairmaid 119234 P.I., born Aug. 9, bred by the late Edward Hollingworth, C.B.E.; s. Hache Buringa 25871 P.I., d. Moordale Mina 74242 P.I. by Moordale Max 14883 P.I.
1583 III. (£5).—BERTRAM PARKINSON, Creskeld Hall, Arthington, Leeds, for Creskeld Buringa's Gloria 114726, born July 4; s. Hache Buringa 25871 P.I., d. Beccles Gloria 23400 by Beccles (imp.) Lodewijk 3501.
1580 IV. (£4).—JOHN HORRIDGE, Plas Llanfair, Llanfair P.G., Anglesey, for Llanfair Peggy 118563, born Aug. 25; s. Llanfair Paul 20755 P.I., d. Chaddesley Peggy 37788 by Wychnor (imp.) Ynte 4709.
1578 R. N.—CLIFFORD W. H. GLOSSOP, The Lund Dairies, Bramwith, Doncaster, for Lund Bleachfy's Juliet.

¹ Perpetual Bronze Challenge Trophy, given by the Friesland Cattle Breeders' Association, for the best group of three British Friesian animals bred by Exhibitor.

² Prizes, except Fourth and Fifth, given by the British Friesian Cattle Society.

Ayrshires.

Class 186.—Ayrshire Bulls, born on or before September 1, 1927.

- 1588 I. (£15).—COL. W. T. R. HOULDSWORTH (of Kirkbride), Threave, Kirkmichael, Ayrshire, for Dunlop Radiance 25732, born Nov. 28, 1924, bred by Mrs. Housion Craufurd, Dunlop Place, Dunlop; s. Dunlop Lustre 22453, d. Dunlop Mist 79150 by Howie's Hot Stuff 17895.
 1592 II. (£10).—F. H. SANDERSON, Eshott Home Farm, Felton, Northumberland, for Eshott Element 27020, born March 27, 1926; s. Howie's Eminent 16973, d. Newlands Elma 70714 by Newlands King 16764.
 1590 III. (£5).—JONES & WATSON, Great Beallings House, Woodbridge, for Millantae Follow On 27790, born Sept. 2, 1926, bred by John Johnstone, Millantae, Lockerbie; s. Millantae Carry On 23071, d. Millantae Clip 74808 by Overton Hiawatha 11054.
 1587 R. N.—ALFRED BARCLAY, Manor Farm, Compton, Berks, for Benthead Dividend.

Class 187A.—Ayrshire Cows (in-milk), born on or before September 1, 1924.

- 1595 I. (£15).—ALFRED BARCLAY, Manor Farm, Compton, Berks, for Mid Kelton May 4th 87713, born Jan. 8, 1922, calved June 26, 1928, bred by John R. Miller, Mid Kelton, Castle Douglas; s. Howie's High Merit 17894, d. Mid Kelton May 2nd 75940 by Howie's Sunburst 14006.
 1604 II. (£10).—DAVID WALLACE, Auchrain, Mauchline, for Auchrain Big Kate 18th 92360, born Feb. 22, 1923, calved May 10, 1928; s. Southcraig Footprint 19958, d. Auchrain Big Kate 6th 47605 by Auchrain Exchange 10208.
 1602 III. (£5).—F. H. SANDERSON, Eshott Home Farm, Felton, Northumberland, for Newlands Sunbeam 70748, born Jan. 17, 1918, calved May 7, 1928, bred by C. H. Sanderson, Newlands, Belford; s. Kirkland Braw Lad 15721, d. Broadmoss Sunbeam 2nd 39951 by Knockterra Coronation 8740.

Class 187B.—Ayrshire Cows, in-calf, born on or before September 1, 1924.

- 1605 I. (£15).—JOHN WEIR, Midtown, New Abbey Road, Dumfries, for Midtown Amy 59483, born Feb. 7, 1919; s. Dalhbie Banker 15833, d. Midtown Snowdrop 2nd (Ap. A, Vol. 34, p. 894) by Southwick Bonnie Scotland 6769.
 1599 II. (£10).—COMMANDER E. W. B. LEAKE, Hollybush, Ayrshire, for Dalgig Milkmaid 1824, born March 1, 1922, bred by Jacob S. Murray, Dalgig, New Cumnock; s. Killelan Park Colonel 25808, d. Carston Merrymaid 33835 by Carston St. Thomas 7904.
 1600 III. (£5).—D. HAMILTON SANDERSON, The Birks, Stamfordham, Northumberland, for Newlands Starlight 5th 77888, born Jan. 9, 1921, bred by C. H. Sanderson, Newlands, Belford; s. Howie's Monarch 16975, d. Newlands Starlight 55983 by Bankend King David 9772.
 1601 R. N.—F. H. SANDERSON, Eshott Home Farm, Felton, Northumberland, for Campbellton Beauty 12th.

Class 188.—Ayrshire Cows or Heifers (in-milk or in-calf), born after September 1, 1924.¹

- 1613 I. (£15).—COMMANDER E. W. B. LEAKE, Hollybush, Ayrshire, for Dalgig Helen 4812, born April 14, 1926, calved July 16, 1928, bred by Jacob S. Murray, Dalgig, New Cumnock; s. Dalgig Baron 23163, d. Carston Helen 81427 by Muir General French 14573.
 1606 II. (£10).—ALFRED BARCLAY, Manor Farm, Compton, Berks, for Laigh Tarbeg Bell 4th 10744, born in Jan., 1926, calved June 13, 1928, bred by George Connell, Laigh Tarbeg, Ochiltree; s. Holehouse Double Gift 24750, d. Laigh Tarbeg Bell 2nd 90027 by Overton Ayrshire Hero 19837.
 1611 III. (£5).—COL. W. T. R. HOULDSWORTH (of Kirkbride), Threave, Kirkmichael, Ayrshire, for Drumsale Princess Dora 5407, born Jan. 17, 1926, in-calf, bred by H. C. Winter, Drumsale, Drangan; s. Drumsale Masterpiece 26658, d. Drumsale Carona 83484 by Lessenock Pull Bloom 17153.
 1612 R. N.—COMMANDER E. W. B. LEAKE, for Dalgig Buttercup.

Guernseys.

N.B.—Unless otherwise stated the numbers refer to the English Guernsey Herd Book.

Class 189.—Guernsey Bulls, born on or before 1925.

- 1618 I. (£15, & Champion).²—SIR ERIC HAMBO, K.B.E., Milton Abbey, Blandford, for Downe Valentine's Honour of Vimiera 3913, fawn and white, born June 9, 1919, bred by F. Belloir, Vimiera, St. Peter Port, Guernsey; s. Valentine's Honour of the Passée 3826, d. Lily 2nd of Vimiera 12270 P.S., R.G.A.S. by Clara's Sequel 2207 P.S., R.G.A.S.
 1617 II. (£10).—COMMANDER COSMO DOUGLAS, Hazelby, Newbury, for Clatford Rosie's Sequel of Vimiera 3878, fawn and white, born Aug. 27, 1919, bred by F. Belloir, Vimiera, Guernsey; s. Governor 3rd of Les Grantes 52 O, d. Rosie of Vimiera 15520 P.S., R.G.A.S. by Governor of the Corbinex 3302 P.S., R.G.A.S.

¹ Prizes given by the Ayrshire Cattle Herd Book Society.

² Champion Prize of £5, given by the English Guernsey Cattle Society, for the best Bull.

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- 1619 III. (25.)—MISSIS HARGREAVES, Nazeing Park, Essex, for Clara's Lad of King's Mills 6020, fawn and white, born July 26, 1924, bred by J. N. Dorey, King's Mills, Catel, Guernsey; s. May Rose Lad of the Spurs 8153, d. Calara's Bounty of Maple Lodge 18995 P.S., R.G.A.S. by Clara's Emblem 3994 P.S., R.G.A.S.
- 1620 IV. (24.)—CAPT. E. JENKINS, Netherleigh, Hayle, Cornwall, for Sailor Lad of the Palotterie 5468, fawn and white, born June 16, 1923, bred by E. W. Langlois, La Palotterie, St. Peters, Guernsey; s. Zanzibar 2nd of the Free 4598 P.S., R.G.A.S., d. Butter Girl of Palotterie 3rd 17222 P.S., R.G.A.S. by Sailor Lad of the Fontaines 3725 P.S., R.G.A.S.
- 1616 E. N.—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, Cornwall, for Tregenna May Bird.
H. C.—1621. C.—1623.

Class 190.—Guernsey Bulls, born in 1926.

- 1623 I. (215. & R. N. for Champion.)—SIR ERIC HAMBRO, K.B.E., Milton Abbey, Blandford, for Fernhill Rose Lad 6432, fawn and white, born June 26, bred by W. Dunkels, Fernhill Park, Windsor Forest; s. Rose Lad of Goodnestone 3163, d. Downe Fleur of Vimiera 14281 by Valentine's Honour of the Passée 3826.
- 1629 II. (210.)—THE HON. GEOFFREY LAWRENCE, K.C., D.S.O., Hill Farm, Oaksey, Swindon, for Robin Hood of Goodnestone 6605, fawn and white, born Oct. 23, bred by Lord Fitz-Walter, Goodnestone Park, Canterbury; s. Wintergreen's Slogan of Goodnestone 2nd 5208, d. Maid Marion of Goodnestone 19218 by Sequel's Slogan 4933.
- 1637 III. (25.)—W. WHITE & SON, Pool Farm, Taunton, for Poltimore Mascot 6394, fawn and white, born May 28, bred by Lord Poltimore, Court Hall, North Molton; s. Royal of Beaulieu 4922, d. Matron of Videclins 19234 by Golden Noble 2nd of New Volante 4477 P.S., R.G.A.S.
- 1627 IV. (24.)—R. FEARCE GOULD, Beech Croft, Costessey, Norwich, for Bealings Rose's Conqueror 6580, fawn and white, born June 29, bred by Mrs. E. Howe, Bealings, Suffolk; s. Lenore's Sequel 2nd of Vimiera 4857, d. Bealings Rose 4th 10091 by Gurlyn John 3529.
- 1632 V. (23.)—MRS. JOHN G. PEEL, Peover Hall, Knutsford, for Wytham Goldfinch 6391, fawn and white, born May 21, bred by Eric H. Rose, Wytham Abbey, Oxford; s. Tre-widden Goldfinch 5994, d. Tre-widden Gladiolus 2nd 18478 by Tre-widden Magnet 4357.
- 1626 E. N.—ERNEST WILLIAM FLINT, Manor Farm, Wells-on-Sea, Norfolk, for Copped Hall Python.
H. C.—1636. C.—1625.

Class 191.—Guernsey Bulls, born in 1927.

- 1642 I. (215.)—SIR ERIC HAMBRO, K.B.E., Milton Abbey, Blandford, for Milton Goldfinder 2nd 6780, fawn and white, born Jan. 21; s. Hayes Goldfinder 2nd 5788, d. Hayes Ivy 2nd 21160 by Downe Warblers Dream 4th 4773.
- 1645 II. (210.)—THE HON. GEOFFREY LAWRENCE, K.C., D.S.O., Hill Farm, Oaksey, Swindon, for Flintham Treacle 4th 6730, fawn and white, born March 17; s. Lord Guilbert 4th of Orpington 4864, d. Dene Treacle 3rd 15223 by Raymond of Carteret 2nd 3788.
- 1640 III. (25.)—W. DUNKELS, Fernhill Park, Windsor Forest, for Fernhill Rose Lad 3rd 6880, fawn and white, born May 20; s. Rose Lad of Goodnestone 3163, d. Downe Fleur of Vimiera 14281 by Valentine's Honour of the Passée 3826.
- 1639 IV. (24.)—LT.-COL. E. H. W. BOLITHO, Trengwainton, Heamoor, Cornwall, for Treng-wainton Blaze 6827, fawn and white, born May 3; s. Trengwainton Arum 5434, d. Trengye Maze 14842 by Ladoek Prince Charming 3165.
- 1649 E. N.—MRS. J. SUTCLIFFE PYMAN, Narsebury, Sutton Scotney, Hants, for Narsebury Noel.
H. C.—1647.

Class 192.—Guernsey Cows (in-milk), born in or before 1923.

- 1652 I. (215. & Champion.)—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, Cornwall, for Jane of Tregonning 7th 18703, yellow and white, born April 30, 1923, calved May 8, 1928; s. Puddington Toreador 4296, d. Tregonning Jane 3rd 14818 by Hammill of Marazion 3334.
- 1655 II. (210.)—MISSIS HARGREAVES, Nazeing Park, Essex, for Nazeing Marigold 2nd 19751, fawn and white, born Nov. 11, 1923, calved June 11, 1928; s. Ilungueta de Bas Hope 3rd 4849, d. Nazeing Marigold 18118 by Durrington Rose King des Houards 3685.
- 1660 III. (25.)—MISSES C. NORMAN, Moor Place, Much Hadham, Herts, for Hadham Maid 16539, red, fawn and white, born May 9, 1921, calved May 28, 1928; s. Downe Star of Honeyman 3909, d. Hadham Maid of Maurant 14399 by Monarch of the Spurs 3917 P.S., R.G.S.A.
- 1653 IV. (24.)—GEORGE BLIGHT & SON, for Roswarne Buttercup 18294, yellow and white, born Jan. 23, 1922, calved May 1, 1928, bred by J. M. Holman, Roswarne, Camborne; s. Tregonning Field Marshal 4054, d. Roswarne Dorothy 2nd 18853 by Ladoek Prince 2995.
- 1650 V. (23.)—W. A. ARGENT, Ghyll Manor, Ruspur, Sussex, for Dairy Maid of Alderney 6th 14213, fawn and white, born Oct. 14, 1919, calved April 8, 1928, bred by Lord Fitz-Walter, Goodnestone Park, Canterbury; s. Favourite 2nd of the Barras 3516, d. Dairy Maid Alderney 5th 12664 by Rose Lad of Goodnestone 3163.

¹ Champion Prize of £5, given by the English Guernsey Cattle Society for the best Bull.

² Champion Prize of £5, given by the English Guernsey Cattle Society, for the best Cow or Heifer.

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1656 R. N.—CAPT. E. JENKINS, Netherleigh, Hayle, Cornwall, for Trequean Mens 4th.
H. C.—1651. C.—1658.

Class 193.—Guernsey Cows or Heifers (in-milk), born in 1924 or 1925.¹

- 1663 I. (£15, & R. N. for Champion.)—A. CHESTER BEATTY, Calehill Park, Little Chart, Ashford, Kent, for Calehill Dewdrop 20201, fawn and white, born March 14, 1924, calved June 2, 1928; s. Lynchmere Lord Roberts 13th 3748, d. Engew Dewdrop 6th 15329 by Engew Gay Boy 2nd 3696.
- 1664 II. (£10).—GEORGE BLIGHT & SON, Tregonning, Breage, Helston, Cornwall, for Tregonning Polly of Lilyvale 22979, yellow and white, born Dec. 27, 1924, calved June 17, 1928, bred by J. Sebire, Tamworth, Alderney; s. Bickleigh Noble 3rd 4724 P.S., R.G.A.S., d. Polly of Lilyvale 25778 P.S., R.G.A.S. by Mabel's Boy of Tamworth 260 P.S., R.A.A.S.
- 1665 III. (£5).—W. DUNKELS, Fernhill Park, Windsor Forest, for Fernhill Fleur of Vimiera 21986, fawn and white, born Jan. 30, 1925, calved June 23, 1928; s. Downe Valentine's Honour of Vimiera 3913, d. Downe Fleur of Vimiera 14281 by Valentine's Honour of the Fosse 3826.
- 1677 IV. (£4).—W. WHITE & SON, Pool Farm, Taunton, for Poltimore Gipsy Queen 22329, fawn and white, born May 22, 1925, calved April 21, 1928, bred by Lord Poltimore, Court Hall, North Molton; s. Pengelly Boy's Sequel 4893, d. Tregonning Gipsy Girl 2nd 18709 by Puddington Treador 4296.
- 1671 V. (£3).—EUSTACE E. PALMER, Prior's Court, Chieveley, Berks, for Calehill Irene 20080, fawn, born Jan. 22, 1924, calved Dec. 29, 1927, bred by A. Chester Beatty, Calehill Park, Little Chart, Ashford, Kent; s. Murrell Golden Cheer 3993, d. Armistice of Duvaux 17260 by Sequel's Mascot 3301 P.S., R.G.A.S.
- 1672 R. N.—MRS. HOWARD PALMER, Heathlands, Wokingham, for Murrell Mildred.
H. C.—1668, 1669. C.—1678.

Class 194.—Guernsey Heifers, born in 1926.

- 1680 I. (£15).—W. A. ARGENT, Ghyll Manor, Ruspur, Sussex, for Rosey 3rd of Ruspur 24365, fawn and white, born June 8; s. Calehill Slogan 5200, d. Josey Goodnestone 10th 16952 by Favourite 2nd of the Barras 3516.
- 1682 II. (£10).—COMMANDER COSMO DOUGLAS, Hazelby, Newbury, for Ladock New Year's Gift 23766, fawn and white, born Jan. 1, bred by Archdeacon Raffles Flint, Nansawsan, Ladock; s. Rival of Myrtle Place 5219, d. Ladock Jessica 2nd 19484 by Glencairn Daisy's Sequel 4201.
- 1680 III. (£5).—E. G. MACANDREW, Pallinghurst, Baynards, Horsham, for Trewithen Ruby 24484, fawn and white, born June 28, bred by Capt. G. H. Johnstone, Trewithen, Gram-pound Road; s. Rival of Myrtle Place 5219, d. Trewithen Orange Blossom 19032 by Lynchmere Pride 4th 3752.
- 1692 IV. (£4).—CAPT. HAROLD J. PILBROW, Mapleton, Edenbridge, Kent, for Mapleton Peggy of L'Ancrese 27272, fawn and white, born April 5, bred by C. Stacey, L'Ancrese, Vale, Guernsey; s. Bickleigh Noble 4th 4869 P.S., R.G.A.S., d. Florence of Les Quartiers 19025 P.S., R.G.A.S. by Valentine's Secret 3827.
- 1690 V. (£3).—MESSRS. C. NORMAN, Moor Place, Much Hadham, Herts, for Hadham Moonshine 24411, fawn and white, born May 25; s. Honeymoon Prince of Hadham 5537, d. Hadham Faigie 2nd 19159 by Downe Star of Honeymoon 3909.
- 1688 R. N.—MRS. J. E. KIRBY, Netley Farm, Woodlands, Southampton, for Hookley Mumty.
H. C.—1683, 1691. C.—1685.

Class 195.—Guernsey Heifers, born in 1927.

- 1698 I. (£15).—LT.-COL. E. H. W. BOLITHO, Trengwainton, Heamoor, Cornwall, for Trengwainton Buttermaid 25757, fawn and white, born Feb. 5; s. Trengwainton Clover 5801, d. Tregey Margaret 15900 by Lynchmere Lord Roberts 13th 3748.
- 1701 II. (£10).—SIR W. H. N. GOSCHEN, K.B.E., Durrington House, Harlow, for Durrington Charmer 10th 28223, dark fawn and white, born May 18; s. Durrington Beauty's Sequel 2nd 6036, d. Durrington Charmer 8th 22860 by Jolie's Durrington Hope 5078.
- 1699 III. (£5).—CAPT. ROBERT B. BRASSEY, Cottesbrooke Hall, Northampton, for Cottesbrooke Primula 26797, fawn and white, born Aug. 15; s. Rose Lad of Goodnestone 3163, d. Fernhill Primrose 18812 by Governor 6th des Ruettes 4613.
- 1710 IV. (£4).—E. G. MACANDREW, Pallinghurst, Baynards, Horsham, for Ivelle Bondmaid 25580, fawn and white, born March 1; s. Cyrene's Sequel of Woodlands 5106, d. Dairy-maid 2nd of L'Eslet 14215 by Noble Boy 3976 P.S., R.G.A.S.
- 697 V. (£3).—A. CHESTER BEATTY, Calehill Park, Little Chart, Ashford, Kent, for Calehill Keepsake 25682, fawn and white, born Jan. 8; s. Woodlands Nobleman 5778, d. Duchess Keepsake 2nd 20551 by Valentine of Vimiera 5707.
- 1718 R. N.—MRS. J. SUTOLIFFE PYMAN, Norsebury, Sutton Scotney, Hants, for Sequel's Maybelle 4th.
H. C.—1696, 1700, 1705, 1713. C.—1704, 1707, 1711.

¹ Prizes, except Fourth and Fifth, given by the English Guernsey Cattle Society.

² Champion Prize of £5, given by the English Guernsey Cattle Society, for the best Cow or Heifer.

Jerseys.

N.B.—In the Jersey Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Island Herd Book. A number without brackets indicates that the animal is registered in the English Jersey Herd Book.

Class 196.—Jersey Bulls, born in or before 1925.

- 1726 I. (£15, & Champion.)—SIR HAROLD MACKINTOSH, Conyngnam Hall, Knarsborough, for North Stoke's Beechnut 15728, whole colour, born April 16, 1925, bred by C. V. Sale, Aston Rowant, Oxon; s. Lenton Rupert 14668, d. Beechwood Success (imported) by General Cowslip 10960.
- 1727 II. (£10).—C. J. PHILLIPS, Old Dalby Hall, Melton Mowbray, for Cupid 13894, whole colour, born March 25, 1921, bred by Major the Hon. H. Pearson, Cowdray Park, Midhurst; s. Pioneer's Noble 12416, d. Roselle by Northcliffe 12728.
- 1730 III. (£5).—CORTLANDT TAYLOR, Platt House Farm, Wrotham Hill, Kent, for Gloxalia's Blue Boy 15656, whole colour, born Sept. 3, 1925, bred by Mrs. Harteup, Newhouse, Penshurst, Kent; s. Gloxalia's Penshurst Pilgrim 15189, d. Bluebell 1516 by Pioneer's Prime 13700.
- 1728 R. N.—MRS. HAYES SADLER, Horne Court, Horne, Horley, for Oxford.

Class 197.—Jersey Bulls, born in 1926.

- 1733 I. (£15, & E. N. for Champion.)—HAYDON STEPHEN FOX, Sharelands, Blackboys, Sussex, for Cowdray Pioneer 11th, broken colour, born April 27, bred by Viscount Cowdray, Cowdray Park, Midhurst; s. Cowdray Pioneer 6th 14578, d. Nella 2nd (imported) by Oxford's Fern Hope 13373.
- 1735 II. (£10).—CORTLANDT TAYLOR, Platt House Farm, Wrotham Hill, Kent, for Fairseat Favorite, whole colour, born Aug. 24; s. Mantle's Favorite 15063, d. Goddington Lady Aldan 4th (Vol. 30, p. 236) by Pioneer's Noble 12416.
- 1736 III. (£5).—BRIG.-GEN. J. T. WIGAN, D.S.O., Danbury Park, Chelmsford, for Financier's King, whole colour, born June 7, bred A. W. Ruggles-Brise, Spains Hall, Finchingleid, Braintree; s. Financier's Lark 15188, d. Carnatie's Gift 5th (Vol. 32, p. 291) by Minorca's Jolly Sultan 12076.
- 1731 R. N.—MRS. G. J. AUSTIN, Ellern Mede, Totteridge, Herts, for Majestic.

Class 198.—Jersey Bulls, born in 1927.

- 1741 I. (£15).—MRS. EVELYN, Wotton House, Dorking, for Wotton Maypole, black, born May 29; s. Wotton King of Clubs 15569, d. Wotton Pink May (Vol. 30, p. 400) by Red Cloud 11818.
- 1745 II. (£10).—H. CECIL PELLY, Venars, Nutfield, Surrey, for Kentwings Poppy's Aroma, broken colour, born March 28; s. Poppy's You'll Do, d. Flashlight Joy by Flashlight 14993.
- 1753 III. (£5).—MRS. SOFER WHITEBURN, Amport St. Mary, Andover, for Cupid's Boy, whole colour, born May 23; s. Cupid 13894, d. St. Mary's Pansy 4th 1115 by The Sweep 14144.
- 1749 IV. (£4).—E. A. STRAUSS, M.P., Kingston House, Abingdon, for Kingston Amira's Boy, whole colour, born April 13; s. Pilgrim Boy 15216, d. Kingston Amira 667 by Knight of Beechwood 13623.
- 1739 V. (£3).—JOHN C. BOOT, Lenton House, Lenton, Nottingham, for Lenton Romer, whole colour, born July 10; s. Martinsaye 15207, d. Rosy Oak Maid (Vol. 33, p. 420) (imported) by Rosy's General Cowslip 12756.
- 1752 R. N.—A. A. WESTON, Holme Grange, Wokingham, for Oreston Gamboler.
- E. C.—1737, 1746.

Class 199.—Jersey Cows (in-milk), born in or before 1924.

- 1759 I. (£15, Champion,* & Special £10.)—MRS. EVELYN, Wotton House, Dorking, for Wotton May Moon 4282, broken colour, born June 19, 1923, calved May 30, 1928; s. Benbury Moonlight 13901, d. Wotton Pink May by Red Cloud 11818.
- 1770 II. (£10).—WILLIAM H. FRESCHOTT, Highlands, Woldingham, Surrey, for Gloria 4909, whole colour, born May 2, 1924, calved June 8, 1928, bred by Mrs. G. J. Austin, Ellern Mede, Totteridge, Herts; s. Feather Knight's Gamboze 14278, d. Lea Nieme's Gilette 737 (imported) by Xenia's Sultan 13798.
- 1772 III. (£5).—HON. MRS. MURRAY SMITH, Gumley Hall, Market Harborough, for Amateur Wife 1412, whole colour, born Feb. 17, 1923, calved March 29, 1928, bred by Mrs. P. Luce, St. Mary's, Jersey; s. Bullseye 14557, d. Lorna Darling (26745) P.S.C. by Anemone's Boy 13172.
- 1783 IV. (£4).—MRS. SOFER WHITEBURN, Amport St. Mary, Andover, for St. Mary's Pansy 4th 1115, whole colour, born June 19, 1921, calved May 16, 1928, bred by C. Le Brocq, St. Mary's, Jersey; s. The Sweep 14144, d. St. Mary's Pansy (22208) P.S.C. by Quarter-master 12427.

* Champion Prize of £5, given by the English Jersey Cattle Society, for the best Bull.

* Champion Prize of £5, given by the English Jersey Cattle Society, for the best Cow or Heifer.

* Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the English Jersey Cattle Society, for the best Cows or Heifers in Classes 199 to 201, bred by Exhibitor, and milked out to the Judge's satisfaction before being judged.

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- 1755 V. (#3).—R. G. BERKELEY, Spetchley Park, Worcester, for So Gay 2578, whole colour, born Jan. 19, 1922, calved June 14, 1928, bred by F. G. Le Rossignol, St. Brelades, Jersey; s. Mytilda's Beau 14305, d. So Fly (23253) P.S.C. by Fly by Night 12001.
 1763 R. N.—SIR HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, for Flotsam Twin.
 H. C.—1757, 1765, 1766, 1769, 1775, 1784. C.—1776, 1778.

Class 200.—Jersey Heifers (in-milk), born in 1925.

- 1792 I. (#15, & R. N. for Champion.¹)—H. CECIL PELLY, Venars, Nutfield, Surrey, for Flashlight Josy, broken colour, born Feb. 24, calved April 13, 1928, bred by J. St. C. Hamon, Trinity, Jersey; s. Flashlight (6041) H.C., d. Amy Josy (22735) P.S.C. by Financial Baron 11310.
 1786 II. (#10, & Special #5.²)—MRS. G. J. AUSTIN, Ellern Mede, Totteridge, Herts, for Golden Beauty 4914, whole colour, born April 29, calved June 14, 1928; s. Golden Orb 15005, d. Jersey Beauty 2nd by Golden Fern's Dairyman 12840.
 1793 III. (#5).—C. J. PHILLIPS, Old Dalby Hall, Melton Mowbray, for Faerie Ladye, broken colour, born March 10, calved May 29, 1928, bred by J. B. Le Feuvre, St. Owens, Jersey; s. Phillora's Volunteer (14415), d. Miss Miranda (28801) P.S.H.C. by Gipsy's Golden Lad 13951.
 1787 IV. (#4, & R. N. for Specials.³)—R. G. BERKELEY, Spetchley Park, Worcester, for Spetchley Gaiety 5638, nearly whole colour, born May 18, calved June 11, 1928; s. Conqueror 15616, d. So Gay 2578 by Mytilda's Beau 14395.
 1789 E. N.—CAPT. F. B. IMBERT-TERRY, M.C., Blue Hayes, Broad Clyst, Devon, for Blue Hayes Choir.
 H. C.—1791.

Class 201.—Jersey Heifers (in-milk), born in 1926.³

- 1802 I. (#15).—MRS. HAYES SADLER, Horne Court, Horne, Herts, Surrey, for Loseley Treaty Slip, whole colour, born April 11, calved July 4, 1928, bred by Brig.-Gen. Longbourne, Loseley Park Guildford; s. Cowslip's You'll Do 15174, d. Peace Treaty 951 by Broadlands Bon 12858.
 1797 II. (#10).—GROSVENOR BERRY, Mount Bures, Colchester, for Double Postage, whole colour, born Jan. 11, calved March 1, 1928; s. Postboy 14896, d. Postgirl 5484 by Nimrod 14890.
 1800 III. (#5).—SIR HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, for Bentworth Arkona's Brune, whole colour, born June 7, calved May 20, 1928, bred by Mrs. Bertram Cater, Bentworth Lodge, Alton, Hants; s. Arkona's Prince 15253, d. Valse Brune 2nd 2697 by Observer 18682.

Class 202.—Jersey Heifers, born in 1927.

- 1820 I. (#15).—CORTLANDT TAYLOR, Platt House Farm, Wrotham Hill, Kent, for Fairseat Favorita, broken colour, born Feb. 18; s. Mantle's Favorite 15063, d. Broadlands Favorite 2nd 4477 by Xenia's Sultan 18798.
 1808 II. (#10).—MISS DRONSFIELD, Norley Hall, Norley, Frodsham, for Wotton Flacid Guide, broken colour, born May 2, bred by Mrs. Evelyn, Wotton House, Dorking; s. Pioneer of Oaklands 6288, d. Gamboges Composed Lassie by S.A.'s Golden Gamboge 14905.
 1816 III. (#5).—WILLIAM H. PRESCOTT, Highlands, Woldingham, Surrey, for Highbelle of Highlands, broken colour, born July 14; s. Wotton King of Clubs 15569, d. Frostie May 3814 by Alligator 14182.
 1813 IV. (#4).—SIR HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, for Penshurst Hamletta's Queen, whole colour, born June 8, bred by George Cross, Smarts Hall, Penshurst; s. Gloxalla's Penshurst Pilgrim 15189, d. Hamletta's Queen (Vol. 32, p. 342) by Allora's Prince 12524.
 1818 V. (#3).—THE HON. MRS. MURRAY SMITH, Gumley Hall, Market Harborough, for Valetta, whole colour, born May 24; s. Post Boy 14896, d. Bayleaf's Valla (Vol. 36, p. 805) by Bayleaf's Jap 12833.
 1822 R. N.—LAURENCE M. TUBBS, The Priory, Stevenage, Herts, for Stevenage Rambler's Star 2nd.
 H. C.—1814, 1821. C.—1807, 1810.

Kerrys.

N.B.—In the Kerry Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Royal Dublin Society's Herd Book. A number without brackets indicates that the animal is registered in the British Kerry Herd Book.

Class 203.—Kerry Bulls, born in or before 1926.

- 1829 I. (#15, & Champion.⁴)—KERRY ESTATES, LTD., Warren House Farm, Stanmore, Middlesex, for Valencia Shah 785, born May 18, 1926; s. Raven of Carton 661, d. Valencia Sunflower 2804 by Czar of Carton (506).

¹ Champion Prize of £5, given by the English Jersey Cattle Society, for the best Cow or Heifer.

² Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the English Jersey Cattle Society, for the best Cows or Heifers in Classes 199 to 201, bred by Exhibitor, and milked out to the Judge's satisfaction, before being judged.

³ Prizes given by the English Jersey Cattle Society.

⁴ Silver Challenge Cup, given by the British Kerry Cattle Society for the best Kerry.

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- 1828 II. (£10.)—KERRY ESTATES, LTD., for Elmhurst Excellency 687, born Sept. 30, 1925, bred by Elmhurst Farming and Trading Co., Ltd., Elmhurst Farm, Slinfold, Sussex; s. Elmhurst Caesar 555, d. Elmhurst Cresta 3569 by Valencia Linksman 496.
 1827 III. (£5.)—MRS. FREELAND, Manor House, Cheselbourne, Dorchester, for Valencia Minstrel 667, born Nov. 8, 1924, bred by Kerry Estates, Ltd., Warron House Farm, Stanmore; s. Valencia Perry 616, d. Valencia Moza 3234 by Valencia Chieftain 421.
 1825 R. N.—LAURENCE CURRIE, Minley Manor, Farnborough, for Ard Caelin Timothy.

Class 204.—Kerry Bulls, born in 1927.

- 1830 I. (£15.)—MISS P. DE B. BOWEN-COLTHURST, Kerry Cow Dairy Farms, Layer-de-la-Haye, Colchester, for Drumgannagh Black Knight, born Oct. 17; s. Valencia Linksman 496, d. Castle Lough Maid 3rd 2887 by Castle Lough Duke (745).
 1836 II. (£10.)—CAPT. NELSON ZAMBRA, M.C., AND C. WILLIAMSON MILNE, West Tisted Manor, Hants, for Hattingley Fred, born March 7; s. Hattingley Barry 690, d. Hattingley Blanche 4126 by Southwater Flash 531.
 1833 III. (£5.)—MRS. FREELAND, Manor House, Cheselbourne, Dorchester, for Cheselbourne Prince 760, born May 7; s. Valencia Minstrel 667, d. Cheselbourne Priscilla 4331 by Duv Demon 640.
 1835 R. N.—JOHN WILLIAM TOWLER, Wadlands Hall, Farsley, Leeds, for Wadlands Flashlight.

Class 205.—Kerry Cows (in-milk), born in or before 1924.

- 1843 I. (£15, & R. N. for Champion.)—KERRY ESTATES, LTD., Warren House Farm, Stanmore, Middlesex, for Valencia Sunflower 2804, born March 18, 1921, calved June 5, 1928; s. Czar of Carton (506), d. Sheen 16th (2756) by Kilmorna Lord 6th (608).
 1844 II. (£10.)—E. P. F. SUTTON, Sidmouth Grange, Reading, for Hattingley Calceolaria 4347, born July 7, 1924, calved May 25, 1928, bred by Capt. Nelson Zambra, M.C., Ropley, Hants; s. Valencia Samson 535, d. Hattingley Honesty 2nd 2671 F.S.
 1848 III. (£5.)—CAPT. NELSON ZAMBRA, M.C., AND C. WILLIAMSON MILNE, West Tisted Manor, Hants, for Hattingley Belle 4116, born May 6, 1923, calved May 14, 1928; s. Valencia Samson 535, d. Hattingley High Kick 2402 F.S.
 1839 IV. (£4.)—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for Valencia Joan 3226, born June 7, 1920, calved May 8, 1928, bred by Kerry Estates, Ltd., Stanmore, Middlesex; s. Czar of Carton (506), d. Valencia Juno 3227 by Valencia Lord 1st (782).
 1837 V. (£3.)—LAURENCE CURRIE, Minley Manor, Farnborough, for Minley Mermaid 3045, born Dec. 12, 1921, calved June 16, 1928; s. Sloe Drop 415, d. Minley Annie 1975 by Minley Rover 287.
 1842 R. N.—MRS. FREELAND, Manor House, Cheselbourne, Dorchester, for Pallas Fairy.
 H. C.—1847. C.—1841, 1845.

Class 206.—Kerry Heifers (in-milk), born in 1925 or 1926.

- 1855 I. (£15.)—CAPT. NELSON ZAMBRA, M.C., AND C. WILLIAMSON MILNE, West Tisted Manor, Hants, for Hattingley Daphne 4361, born Jan. 3, 1925, calved May 22, 1928; s. Minley Monsoon 515, d. Hattingley Hecuba 3918 by Castletown Shamus 501.
 1851 II. (£10.)—JOHN WILLIAM TOWLER, Wadlands Hall, Farsley, Leeds, for Wadlands Filpall 4268, born Sept. 25, 1925, calved March 19, 1928; s. Wadlands Antello 619, d. Wadlands Filcan 4006 by Ard Caelin Dubh Tim 465.
 1849 III. (£5.)—LAURENCE CURRIE, Minley Manor, Farnborough, for Minley Viola, born Dec. 17, 1925, calved April 8, 1928; s. Hattingley Arthur 588, d. Minley Moira 3947 by O.P.H. Watersheen Ratmore 454.
 1854 R. N.—CAPT. NELSON ZAMBRA, M.C., AND C. WILLIAMSON MILNE, for Hattingley Delaty.
 H. C.—1852. C.—1853.

Class 207.—Kerry Heifers, born in 1927.*

- 1864 I. (£15.)—BERTRAM W. A. WATNEY, Chaldon Mead, Caterham, for Chaldon Dearie 4324, born July 26; s. O.P.H. Drops Time 594, d. Dearie of Warren 3835 by Wadlands Castle Lough Lord 536.
 1857 II. (£10.)—LAURENCE CURRIE, Minley Manor, Farnborough, for Minley Butterfly, born Feb. 25; s. Hattingley Beano 691, d. Minley Audrey 2281 by Minley Mars 862.
 1863 III. (£5.)—E. P. F. SUTTON, Sidmouth Grange, Reading, for Kilmorna Clematis 4372, born June 11; s. Hattingley Christopher 722, d. Hattingley Camella 4186 by Minley Monsoon 515.
 1865 IV. (£4.)—CAPT. NELSON ZAMBRA, M.C., AND C. WILLIAMSON MILNE, West Tisted Manor, Hants, for Hattingley Fuchsia, born May 29; s. Hattingley Cyril 765, d. Hattingley Cleo 4356 by Minley Monsoon 515.
 1860 R. N.—ELMHURST FARMING AND TRADING CO., LTD., Elmhurst Farm, Slinfold, Sussex, for Elmhurst Go Fetch.
 H. C.—1851. C.—1859.

* Silver Challenge Cup, given by the British Kerry Cattle Society, for the best Kerry
 * Prizes, except Fourth, given by the British Kerry Cattle Society.

Dexters.

N.B.—In the Dexter Classes, the number inserted within brackets after the name of an animal indicates the number of such animal in the Royal Dublin Society's Herd Book. A number without brackets indicates that the animal is registered in the English Dexter Herd Book.

Class 208.—Dexter Bulls, born in or before 1926.

- 1874 I. (#15).—SIR ARTHUR WHEELER, BART., Woodhouse Eaves, Loughborough, for Ratcliffe Bilberry 937, born June 4, 1925, bred by W. Lindsay Everard, M.P., Ratcliffe Hall, Leicester; s. Fillongley Forest Footpad 785, d. Fillongley Forest Fenberry 3141 by Fillongley Forester 630.
- 1869 II. (#10).—MRS. ERNEST JOHNSON, Ashton Hayes, Chester, for Hookstile Mark Antony 1012, born May 4, 1926, bred by T. A. Stephens, Frensham Manor, Farnham; s. Hookstile Brutus 886, d. Hookstile Katherine 3641 by Quernmore of Hookstile 800.
- 1870 III. (#5).—LADY LODER, Leonardslee, Horsham, for Grinstead Halfpenny 958, born March 26, 1926; s. Brokenhurst Penny 2nd 694, d. Nuthurst Hawk 3rd 3338 by Brockhampton Monarch 693.
- 1868 R. N.—MRS. FRANK ATHERTON BROWN, Bourton Hill House, Moreton-in-Marsh, for Arley Ajax 2nd.

Class 209.—Dexter Bulls, born in 1927.

- 1879 I. (#15).—V. SIVITER SMITH, Low Furtow, Pebworth, Stratford-on-Avon, for Meon Creole, born March 1; s. Bagendon Rampart 904, d. Fillongley Frivol 2926 by Red Ensign 576.
- 1875 II. (#10).—W. LINDSAY EVERARD, M.P., Ratcliffe Hall, Leicester, for Ratcliffe Nubian 1020, born May 24; s. Ratcliffe Negro 939, d. Lyndseys Blackberry 3482 by Grinstead Toreador 788.
- 1878 III. (#5).—MRS. RICHARD MAGOR, Springfield Lyons, Chelmsford, for Grinstead Cranberry, born May 1, bred by Lady Loder, Leonardslee, Horsham; s. Oakridge Berry 931, d. Nuthurst Hawk 3rd 3338 by Brockhampton Monarch 693.

Class 210.—Dexter Cows (in-milk), born in or before 1924.

- 1886 I. (#15, Champion, & Champion).—LADY LODER, Leonardslee, Horsham, for Grinstead Tropicun 3469, born Aug. 18, 1923, calved June 19, 1928; s. Brokenhurst Penny 2nd 694, d. Grinstead Turbot 2513 by Brokenhurst Spalpeen 558.
- 1881 II. (#10).—HENRY FISHER EARL, Fontmell Magna, Shaftesbury, for Bridesmaid 2860, born about 1913, calved April 29, 1928, breeder unknown.
- 1887 III. (#5).—LADY LODER, for Nuthurst Hawk 3rd 3338, born Sept. 29, 1922, calved June 12, 1928, bred by G. L. M. Lutwyche, Forest House, Horsham; s. Brockhampton Monarch 693, d. Grinstead Hawk 2253 by Oakridge Marston Knight 438.
- 1884 IV. (#4).—W. LINDSAY EVERARD, M.P., Ratcliffe Hall, Leicester, for Gort Primula 7th 2627, born April 24, 1916, calved May 8, 1923, bred by D. M. Rattray, Gortnaskehny, Ballybunion, Co. Kerry; s. Gort Ned 5th 631, d. Gort Primula 6th (2542) by Gort Punch 3rd (592).
- 1883 R. N.—W. LINDSAY EVERARD, M.P., for Fillongley Forest Footprint.
H. C.—1883.

Class 211.—Dexter Heifers (in-milk), born in 1925 or 1926.

- 1896 I. (#15).—LADY LODER, Leonardslee, Horsham, Sussex, for Grinstead Carpatia 3616, born Nov. 9, 1925, calved Feb. 7, 1928; s. Cobham Clinker 826, d. Grinstead Carp 2501 by Brokenhurst Spalpeen 558.
- 1891 II. (#10).—HENRY FISHER EARL, Fontmell Magna, Shaftesbury, for Wealden Bit-of-Luck 3884, born April 5, 1926, calved June 12, 1928; s. Bagendon Romp 905, d. Bridesmaid 2860 F.S.
- 1898 III. (#5).—MRS. T. H. PRYTON, Colomendy, Mold, N. Wales, for Colomendy Mary 3787, born March 22, 1926, calved June 23, 1928; s. Oakridge Sentry 796, d. Gratton Gem 3612 by Grinstead Archie 701.
- 1899 IV. (#4).—MRS. T. H. PRYTON, for Gaynes Gay 3800, born March 14, 1925, calved April 16, 1928, bred by the Hon. Gerald Wellesley and the Hon. Mrs. Duberly, Gaynes Hall, Huntingdon; s. Cobham Blacksmith 727, d. La Mancha Liz 2857.
- 1900 R. N.—THEO. A. STEPHENS, Frensham Manor, Farnham, Surrey, for Hookstile Lady Maabeth 2nd.
H. C.—1890, 1897, 1901.

Class 212.—Dexter Heifers, not in-milk, born in 1926 or 1927.*

- 1907 I. (#15, E. N. for Champion, & R. N. for Champion).—LADY LODER, Leonardslee, Horsham, for Grinstead Nightingale 4th 3810, born Dec. 22, 1926; s. Brokenhurst Penny 2nd 694, d. Grinstead Nightingale 3810 by Cobham Caruso 729.

* Silver Challenge Cup, given by the Dexter Cattle Society, for the best Dexter.

* Silver Challenge Breeders' Bowl, given through the Dexter Cattle Society, for the best Dexter, which is already registered in the Dexter Herd Book, and is the progeny of sire and dam already registered.

* Prizes, except Fourth, given by the Dexter Cattle Society.

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- 1905 II. (£10).—W. LINDSAY EVERARD, M.P., Ratcliffe Hall, Leicester, for Ratcliffe Little Favourite 3864, born April 25, 1926; s. Ratcliffe Absalom 859, d. Byford Phyllis 2728 F.S.
 1908 III. (£5).—LADY LODER, for Grinstead Tropaeolum 2nd 3813, born Aug. 28, 1926; s. Grinstead Fred 926, d. Grinstead Tropaeolum 3469 by Brokenhurst Penny 2nd 694.
 1903 IV. (£4).—MISS DORA BOX, Bagendon, Cirencester, for Wightwick Girlie 4th, born Dec. 9, 1926; s. Woodland Gadfly 984, d. Wightwick Girlie 3rd 3891 by Grinstead Dove 838.
 1906 E. N.—MRS. ERNEST JOHNSON, Ashton Hayes, Chester, for Ashtonhayes Mavourneen. H. C.—1910.

Milk Yield Classes.

Class 213.—Dairy Shorthorn Cows or Heifers.

- 1141 I. (£15).—EUSTACE ABEL SMITH, Longhills, Lincoln, for 7882 Longhills Carrie 2nd, red and little white, born March 22, 1919, calved June 2, 1928; s. Longhills Chancellor 143624, d. Carrie 46th by Prince Sotclaw 2nd 86985.
 1139 II. (£10).—KIDNER BROS., Stoke Holy Cross, Norwich, for 10270 Dalby Princess, red, born Dec. 27, 1919, calved June 6, 1928, bred by Belgian Breeding Stock Farm Company, Penfold, Thorpe Satchville; s. Desford 136115, d. 10265 Badminton Duchess 3rd by Needhams Pride 132467.
 1128 III. (£5).—C. J. ALLDAY, Fotheringhay Manor, Peterborough, for 25182 Dunley Charm, white, born July 16, 1919, calved June 26, 1928, bred by Sir A. Herbert, Dunley Manor, Whitchurch, Hants; s. Lord Remenham 62nd 143691, d. Ton Charmer 4th by Darlington Hermit 125112.
 1150 IV. (£4).—G. P. GOLDEN, for Lady Doreen 8th. (See Class 144.)
 1182 V. (£3).—E. MACINTOSH, Boxhill Farm, Dorking, for 64855 Ashe Foggathorpe, roan, born Sept. 12, 1924, calved June 21, 1928, bred by T. L. Martin, Ashe Warren House, Basingstoke; s. Histon Wild Prince 3rd 172496, d. 21858 Tockenham Foggathorpe 5th by Bedfellow 147213.
 1145 E. N.—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., for Lady Winsonia 17th. (See Class 143.) H. C.—1140.

Class 214.—Lincolnshire Red Shorthorn Cows or Heifers.

- 1264 I. (£15).—CHIVERS & SONS, LTD., Histon, Cambridge, for Bendish Cherry 8th (Vol. 26, p. 286), born Sept. 14, 1919, calved May 27, 1928, bred by Stanley Blundell, Bendish House, Welwyn, Herts; s. Bendish Champion 12291, d. Bendish Cherry 3rd by Bracebridge Prince 2nd 7364.
 1255 II. (£10).—BENJAMIN GEORGE BOWSER, Soothern Manor, Lincoln, for Soothern Mistress 3rd (Vol. 30, p. 295), born May 12, 1923, calved May 26, 1928; s. Othy Noble 17842, d. Soothern Mistress by William of Hallington 10362.
 1273 III. (£5).—F. RUSSELL WOOD, for Bendish Sunbeam 6th. (See Class 152.)
 1265 IV. (£4).—JOHN EVENS AND SON, for Burton Irene 2nd. (See Class 152.)
 1271 V. (£3).—STADE AND MERRON, Willards Hill, Ectingham, Sussex, for Willards Witch (Vol. 30, p. 512), born Sept. 30, 1923, calved June 15, 1928, bred by Allan Holm, The Grange, Tilton, Leicester; s. Tilton Marquis 18142, d. Tilton Jessie 1st.
 1263 E. N.—JOHN EVENS AND SON, for Wormleighton Daffodil 4th. H. C.—1256, 1262.

Class 215.—South Devon Cows or Heifers.

- 1318 I. (£15).—JOHN WAKEHAM, Rowden, Newton Ferrers, Devon, for Rowden Patience 29403, born Aug. 5, 1923, calved June 2, 1928; s. Painsford Eustace 9923, d. Pretty Maid 24166 by Edmeston Hero 1st 7094.

Class 216.—Red Poll Cows and Heifers.

- 1368 I. (£15).—VISCOUNT FOLKESTONE, for Longford Symphony. (See Class 165.)
 1358 II. (£10).—MRS. E. M. FOOT, White Hill, Berkhamsted, Herts, for 28412 White Hill Molly, born Aug. 26, 1919, calved May 24, 1928; s. Sudbourne Hector 11224, d. 23321 Sudbourne Molly Belle by Acton Crowfoot 9987.

Class 217.—Blue Albion Cows or Heifers.

- 1420 I. (£15).—PERCY DOBSON, for Anderson Cornflower. (See Class 171.)

Class 218.—British Friesian Cows or Heifers.

- 1502 I. (£15, & Champion).—E. G. BARTON, Saundby, Retford, for Chaddesley Hedge Rose 2nd 69470, born April 16, 1923, calved June 21, 1928, bred by J. H. Bean, Chaddesley Corbett, Kidderminster; s. Chaddesley Comrade 13497, d. Chaddesley Hedge Rose 43954 by Glennane Pioneer 7923.
 1482 II. (£10, & R. N. for Champion).—LT.-COL. CHARLES W. BIRKIN, O.M.G., Lamcote, Radcliffe-on-Trent, for Bramcote Agatha 59360, born March 18, 1922, calved May 27, 1928, bred by Major Philip A. Birkin, The Grove, Bramcote; s. Colton Bert Wizard 9849, d. Gilston Agatha 8208 by Gilston Jack 209.

¹ Champion Prize of £30, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Dairy Shorthorn, Lincolnshire Red Shorthorn, South Devon, Red Poll, Blue Albion, and British Friesian Milk Yield Competitions.

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- 1488 III. (£5).—LORD RAYLEIGH, for Farling Lead 18th. (See Class 179.)
 1494 IV. (£4).—J. R. UPSON, Saracens, Saunders Lane, Woking, for Macknade Desturgy 47244, born Nov. 9, 1920, calved May 18, 1928, bred by F. and T. Neame, Macknade, Faversham; s. Wynchnor Douglas 10887, d. Macknade Esther 34720 by Golf Bote 4th 5131
 1508 V. (£3).—CAPT. F. F. A. HEILGERS, for Wyken Pels Peach 2nd. (See Class 180.)
 1510 R. N.—BERTRAM PARKINSON, Creskeld Hall, Arthington, Leeds, for Creskeld Lotus. H. C.—1481, 1496, 1503.

Class 219.—*Ayrshire Cows or Heifers.*

- 1604 I. (£15, & R. N. for Champion.)—DAVID WALLACE, for Auchenbrain Big Kate 13th. (See Class 187A.)
 1602 II. (£10).—F. H. SANDERSON, for Newlands Sunbeam. (See Class 187A.)

Class 220.—*Guernsey Cows or Heifers.*

- 1652 I. (£15).—GEORGE BLIGHT AND SON, for Jane of Tregonning 7th. (See Class 192.)
 1671 II. (£10).—EUSTACE E. PALMER, for Calchill Irene. (See Class 193.)
 1658 III. (£5).—MRS. J. E. KIRBY, Netley Farm, Woodlands, Southampton, for Woodlands Lady Wyn 19061, light red and white, born July 12, 1923, calved April 18, 1928; s. Mildred's Slogan of Woodlands 4544, d. Richmond's Yme 18272 by Queen's Fancy 4913.
 1661 IV. (£4).—MRS. HOWARD PALMER, Heathlands, Wokingham, for Murrell Ladyship 18106, fawn and white, born Nov. 11, 1922, calved May 14, 1928; s. Murrell Desmond 4283, d. Murrell Golden Lady 12268 by Lynchmere Lord Roberts 2nd 2794.
 1677 R. N.—W. WHITE AND SON, for Poltimore Gipsy Queen. (See Class 193.)
 H. C.—1650, 1663.

Class 221.—*Jersey Cows or Heifers.*

- 1756 I. (£15, Champion,¹ & Special.²)—GROSVENOR BERRY, Mount Bures, Colchester, for Postmistress 2430, whole colour, born Jan. 23, 1922, calved April 28, 1928; s. Lord Blackberry 13641, d. Postage 2nd by Verdun 12789.
 1778 II. (£10, & R. N. for Special.³)—E. A. STRAUSS, M.P., Kingston House, Abingdon, for Kingston Bunt 668, whole colour, born April 29, 1921, calved Dec. 18, 1927; s. Knight of Beechwood 13623, d. Ekeby Lizabeth by Sailor Boy 13111.
 1761 III. (£5).—CAPT. F. B. IMBERT-TERRY, M.O., Blue Hayes, Broad Clyst, Devon, for Blue Hayes Sporan (Vol. 32, p. 280), whole colour, born Dec. 18, 1917, calved April 24, 1928; s. Hotspur 12667, d. Blue Hayes Scottie by Simpkins Chief 10446.
 1781 IV. (£4).—DR. HERBERT WATNEY, Buckhold, Pangbourne, for Thalia 5721, broken colour, born Aug. 19, 1923, calved Jan. 18, 1928; s. Gauntlet's Majesty 13270, d. Minstrel's Thorn 2nd by Minstrel 13028.
 1782 V. (£3).—DR. HERBERT WATNEY, for Thorny 2673, broken colour, born Oct. 25, 1921, calved Jan. 25, 1928; s. Gamboline's Golden Lad 13574, d. Minstrel's Thorn 2nd by Minstrel 13028.
 1780. R. N.—DR. HERBERT WATNEY, for Lady Iria 3rd.
 H. C.—1757, 1760, 1763, 1778, 1779, 1792, 1797.

Class 222.—*Kerry Cows or Heifers.*

- 1848 I. (£15, Champion,⁴ & Champion.⁵)—CAPT. NELSON ZAMBRA AND C. WILLIAMSON MILNE, for Hattingley Belle. (See Class 205.)
 1844 II. (£10, & R. N. for Champion.⁶)—E. F. E. SUTTON, for Hattingley Calceolaria. (See Class 205.)
 1848 III. (£5).—KERRY ESTATES, LTD., for Valencia Sunflower. (See Class 205.)
 1842 IV. (£4).—MRS. FREELAND, Manor House, Cheselbourne, Dorchester, for Pallas Fairy 8438, born Feb. 18, 1918, calved April 30, 1928, bred by J. C. McKay, Pallas House, Beaufort, Co. Kerry; s. Pallas Paddy 2nd (£10), d. Pallas Sheen (3975) by Pallas Paddy (762).
 1845 E. N.—J. W. TOWLER, Wadlands Hall, Farsley, Leeds, for Vaddy Trent 4th.
 H. C.—1837.

Class 223.—*Dexter Cows or Heifers.*

- 1880 I. (£15, R. N. for Champion,⁷ & Champion.⁸)—MRS. F. ARTHURTON BROWN, Bourton Hill House, Moreton-in-Marsh, for Bourton Hill Myrtle 3063, born in 1920, calved May 7, 1928, breeder unknown.

¹ Champion Prize of £20, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Ayrshire, Guernsey and Jersey Milk Yield Competitions.

² Special Prize of £10 10s., given by the Royal Jersey Agricultural Society, for the Jersey Cow gaining the highest number of points in the Milk Yield Competitions.

³ Champion Prize of £10, with £5 to the Reserve Number, given by a Society interested in the production of milk, for the Cows obtaining the highest number of points in the Kerry and Dexter Milk Yield Competitions.

⁴ The "Elmhurst" Perpetual Silver Challenge Cup, given by the British Kerry Cattle Society, for the Kerry Cow gaining the highest number of points.

⁵ Perpetual Silver Challenge Cup, given by the Dexter Cattle Society, for the Dexter Cow gaining the highest number of points.

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- 1881 II. (#10, & R.N. for Champion.)—H. F. EARL, for Bridesmaid. (See Class 210.)
 1888 III. (#5.)—MRS. HOWARD PALMER, Heathlands, Wokingham, for Brokenhurst Syringa 3076, born July 10, 1922, calved May 28, 1928, bred by Lady Kathleen Hare, Brokenhurst Park; s. Brokenhurst Penny 2nd 694, d. Bagendon Nixie 2568 by Slogan of Claragh 682.
 1884 R. N.—W. LINDSAY EVERARD, M.P., for Gort Primula 7th. (See Class 210.)

Butter Tests.

Class 224A.—Cows exceeding 900 lb. live weight.

- 1782 I. (#15, & G.M.)—DR. HERBERT WATNEY, for Thorny. (See Class 221.)
 1502 II. (#10.)—E. G. BARTON, for Chaddesley Hedge Rose 2nd. (See Class 218.)
 1756 III. (#5, & S.M.)—GROSVENOR BERRY, for Postmistress. (See Class 221.)
 1780 IV. (#4, & B.M.)—DR. HERBERT WATNEY, for Lady Liza 3rd (Vol. 31, p. 322), whole colour, born Dec. 30, 1916, calved March 23, 1928; s. Lady's Sabina 11748, d. Capsicum's Liza 2nd by Capsicum 10892.
 1264 V. (#3.)—CHIVERS & SONS, LTD., for Bendish Cherry 8th. (See Class 214.)
 1268 R.N.—JOHN EVENS AND SON, for Wormleighton Daffodil 4th.
 1757 C.M.—GEORGE CROSS, for Doreen.
 1760 C.M.—CAPT. IMBERT TERRY, for Blue Hayes Bannock.
 1761 C.M.—CAPT. IMBERT TERRY, for Blue Hayes Sporrán.
 1779 C.M.—DR. HERBERT WATNEY, for Blackberry Leaf.
 H. C.—899, 1139, 1141, 1265, 1318, 1353, 1368, 1420, 1494, 1510, 1558, 1671, 1844, 1848.

Class 224B.—Cows not exceeding 900 lb. live weight.

- 1781 I. (#15.)—DR. HERBERT WATNEY, for Thalia. (See Class 221.)
 1776 II. (#10.)—E. A. STRAUSS, M.P., for Kingston Bunt. (See Class 221.)
 1763 III. (#5.)—SIR HAROLD MACINTOSH, Conyngham Hall, Knaresborough, for Flotsam Twin 4857, whole colour, born Jan. 8, 1923, calved May 29, 1928, bred by J. P. Rondel, St. Johns, Jersey; s. Observer 13862, d. Flotsam (11045) F.S.H.C.
 1792 IV. (#4.)—H. CECIL PELLY, for Flashlight Joy. (See Class 200.)
 1880 V. (#3.)—MRS. F. ATHERTON BROWN, for Bourton Hill Myrtle. (See also Class 223.)
 1778 R. N. & G.M.—CORTLANDT TAYLOR, Platt House Farm, Wrotham Hill, Kent, for Nobody's Pet.
 1797 C.M.—GROSVENOR BERRY, for Double Postage.
 H. C.—1831.

GOATS.⁴

Class 225.—Toggenburg or British Toggenburg Female Goats (in-milk), any age.

- 1911 I. (#5, & Champion.)—MISS MARY BURGESS, Oliver's Stray, Sutton Grange, Ripon, for Cleeter Odette T 630, Toggenburg, born Feb. 28, 1923, kidded Feb. 24, 1928, bred by Countess Bathurst, Cirencester.
 1912 II. (#3, & R. N. for Champion.)—MISS MARY BURGESS, for Fryston Saucy Sue T 595, Toggenburg, born April 13, 1925, kidded Feb. 28, 1928, bred by P. Wainwright, Sheep-walks, Castleford; s. Edel T. 524, d. Fryston Senna T. 540 by Edel T. 524.
 1913 III. (#2.)—MISS GRESLEY HALL, Craycombe House, Pershore, for Webb Diana 7657, British Toggenburg, born April 13, 1926, kidded March 16, 1928; s. Carpenter T 528 d. Durley Drusilla 6246 by Durley Desmond 5725.

Class 226.—Saanen or British Saanen Female Goats (in-milk), any age.

- 1916 I. (#5.)—MISS EMILY SKIDMORE, Ashley Leigh, Box, Wilts, for Heddon Sophia 7231, British Saanen, born March 4, 1925, kidded March 5, 1928; s. Peter of Bashley 4207, d. Heddon Spring 5263 by Peter of Bashley 4207.
 1915 II. (#3.)—MRS. MORCOM, The Clock House, Bromsgrove, for Cornish Prophetess 7480, British Saanen, born Feb. 1, 1926, kidded Dec. 14, 1927; s. Ridgeway Rianunculum 5628, d. Cornish Le Fay 6364 by Tremedda Perceval 3136.
 1914 III. (#2.)—MRS. MORCOM, for Cornish Guinevere 6158, British Saanen, born March 22, 1923, kidded Feb. 5, 1928; s. Dochfour Arrogance 3503, d. Cornish Igraine 8332 by Tremedda Perceval 3136.

¹ Perpetual Silver Challenge Cup, given by the Dexter Cattle Society, for the Dexter Cow gaining the highest number of points.

² Gold Medal (or £10 in money), Silver Medal and Bronze Medal, given by the English Jersey Cattle Society, for the three Jersey Cows obtaining the greatest number of points in the Butter Tests.

³ Certificate of Merit, given by the English Jersey Cattle Society, for Jersey Cows, not being Prize Winners, obtaining the following points: Cows four years old and under, 30 points; Cows over four years old, 35 points.

⁴ £30 towards these prizes were given by the British Goat Society.

⁵ Breed Challenge Certificate, given by the British Goat Society, for the best Toggenburg Female Goat, over 2 years old.

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Class 227.—*Anglo-Nubian Female Goats (in-milk), any age:*

- 1921 I. (25, & Champion.¹)—MISS K. PELLY, Theydon Place, Epping, for Theydon Apricot 1873, born Feb. 18, 1925, kidded April 25, 1928; s. Theydon Banjo 1574, d. Theydon Almond 1444 by Edenbreck Klito 947.
- 1918 II. (23, & R. N. for Champion.¹)—MISS K. PELLY, for Wrentham Barbara 1835, born April 25, 1924, kidded April 6, 1928, bred by Miss Hyde-Clarke, Wrentham, Suffolk; s. Sadberge Marcus Coriolanus 1003, d. Nash Belinda 1241 by Edenbreck Danaus 843.
- 1920 III. (22.)—MISS K. PELLY, for Theydon Almeida 1766, born April 6, 1926, kidded Feb. 6, 1928; s. Theydon Banjo 1574, d. Theydon Almond 1444 by Edenbreck Klito 947.
- 1923 R. N.—B. Z. WRIGHT, Crabbettes, Hoveton St. John, Wroxham, Norfolk, for Hoveton Dahlia.
- H. C.—1922.

Class 228.—*British Alpine Female Goats (in-milk), any age.*

- 1927 I. (25, Champion.¹ & Champion.²)—MRS. ARTHUR ABBEY, Didgemere Hall, Roydon, Essex, for Didgemere Drusilla 7726, born May 1, 1926, kidded March 2, 1928; s. Prophet of Bashley 3775, d. Didgemere Delia 6409 by Didgemere Daniel 5955.
- 1925 II. (23, R. N. for Champion.¹ & R. N. for Champion.²)—MRS. ARTHUR ABBEY, for Didgemere Delia 6409, born March 1, 1924, kidded March 5, 1928; s. Didgemere Daniel 5955, d. Didgemere Delliah 5553 by Prophet of Bashley 3775.
- 1929 III. (22.)—MRS. ARTHUR ABBEY, for Priestess of Bashley 6927, born Feb. 9, 1925, kidded March 5, 1928, bred by Miss Pope, Bashley Lodge, New Milton; s. Didgemere Dictator 6816, d. Playful of Bashley 5222 by Herne Bay Thark 4916.
- 1930 R. N.—MISS C. CHAMBERLAIN, Westons, Lyndhurst, Hants, for Whimsical of Westons.
- H. C.—1928, 1933. C.—1932.

Class 229.—*Female Goats (in-milk), any age, any other variety, not eligible for Classes 225 to 228.*

- 1941 I. (25.)—MISS POPE, Bashley Lodge, New Milton, Hants, for Proverb of Bashley 6932, British, born March 11, 1925, kidded Jan. 29, 1928; s. Ridgeway Rumpelstiltskin 6536, d. Paradox of Bashley 6424 by Herne Bay Thark 4916.
- 1934 II. (23.)—MRS. ARTHUR ABBEY, Didgemere Hall, Roydon, Essex, for Didgemere Dogrose 6410, British, born March 1, 1924, kidded March 18, 1928; s. Didgemere Daniel 5955, d. Didgemere Delliah 5553 by Prophet of Bashley 3775.
- 1935 III. (22.)—MISS ALEXANDER, Byards Lodge, Knaresborough, for Stockwell Tyelette 7041, British, born Feb. 22, 1925, kidded Feb. 20, 1928; s. Widbury Sultan 5881, d. Stockwell Tyke by Stockwell Grange 4568.
- 1938 IV. (21.)—MISS GRESLEY HALL, Craycombe House, Pershore, for Wire Mill Delia 4708, British, born Feb. 14, 1921, kidded April 25, 1928, bred by Miss Whitfield, Funnell's Farm, Nutley, Sussex; s. Professor of Bashley 3940, d. Pytchley Jemima 3787 by Pytchley Daddybell 3401.
- 1942 R. N.—MISS EMILY SKIDMORE, Ashley Leigh, Box, Wilts, for Heddon Saltoellar.

Class 230.—*Toggenburg, British Toggenburg, Saanen or British Saanen Goatslings, over 1 but not exceeding 2 years old.*

- 1943 I. (25, & R. N. for Champion.⁴)—MRS. ARTHUR ABBEY, Didgemere Hall, Roydon, Essex, for Didgemere Destiny 8210, British Saanen, born April 1, 1927; s. Broxbourne Gold 62, d. Didgemere Deutelia 5957 by Prophet of Bashley 3775.
- 1946 II. (23.)—MISS C. CHAMBERLAIN, Westons, Lyndhurst, Hants, for Worthy of Westons 7969, British Saanen, born Feb. 21, 1927; s. Foot of Bashley 7457, d. Welfare of Westons 4840 by Proud 2853.
- 1944 III. (22.)—MRS. ARTHUR ABBEY, for Didgemere Dimity 8213, British Saanen, born March 16, 1927; s. Didgemere Daniel 5955, d. Didgemere Damask 5477 by Tremedda Persius.
- 1947 R. N.—MISS EMILY SKIDMORE, Ashley Leigh, Box, Wilts, for Heddon Swing.

Class 231.—*Anglo-Nubian Goatslings, over 1 but not exceeding 2 years old.*

- 1940 I. (25.)—MISS K. PELLY, Theydon Place, Epping, Essex, for Theydon Barbarette 1802, born Feb. 17, 1927; s. Herne Bay President 1553, d. Wrentham Barbara 1835 by Sadberge Marcus Coriolanus 1003.
- 1950 II. (23.)—MISS K. PELLY, for Theydon Binkle 1842, born May 1, 1927; s. Theydon Beau Brocade 1877, d. Theydon Butterfly 1815 by Sadberge Marcus Coriolanus 1003.
- 1951 III. (22.)—B. Z. WRIGHT, Crabbettes, Hoveton St. John, Wroxham, Norfolk, for Hoveton Begonia 1792, born Jan. 20, 1927; s. Hoveton Furniture 1738, d. Benares Bride 1690 by Theydon Banjo 1574.
- 1948 R. N.—MISS K. PELLY, for Theydon Antoinette.
- H. C.—1952.

¹ Breed Challenge Certificate given by the British Goat Society, for the best Anglo-Nubian Female Goat, over 2 years old.

² Challenge Certificate, given by the British Goat Society, for the best Female Goat, over 2 years old, that has borne a kid.

³ Bronze Medal, given by the British Goat Society, for the best Female Goat

⁴ Bronze Medal, given by the British Goat Society, for the best Goatling.

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Class 232.—Goatlings, any other variety, over 1 but not exceeding 2 years old, not eligible for Classes 230 and 231.

- 1954 I. (25, & Champion.)—MRS. ARTHUR ABBEY, Didgemere Hall, Roydon, Essex, for Didgemere Diadem 8212, British Alpine, born March 20, 1927; s. Prophet of Bashley 3775, d. Withead Countess 2855 by Leazes Lucky Halton.
 1957 II. (23).—MISS POPE, Bashley Lodge, New Milton, Hants, for Didgemere Topsy 8115, British, born March 14, 1927, bred by Mrs. Arthur Abbey, Didgemere Hall, Roydon, Essex; s. Didgemere Daniel 5955, d. Didgemere Doreen 5079 by Prophet of Bashley 3775.
 1958 III. (22).—MRS. G. M. SOAMES, Long Buckby Wharf, Rugby, for Fytchley Corona 8247, British, born July 1, 1927; s. Priest of Bashley 6928, d. Mayfield Carmen 2538 by Cherub,
 1958 R. N.—MRS. ARTHUR ABBEY, for Didgemere Danette.
 H. C.—1955.

Class 233.—Female Kids, any variety, not over 1 year old.

- 1963 I. (25).—MISS C. CHAMBERLAIN, Westons, Lyndhurst, Hants, for Whiss of Westons 8528, British Saanen, born March 9, 1928; s. Wordsworth of Westons 7967, d. Wistful of Westons 4641 by Edenstead Pluck 3007.
 1968 II. (23).—MISS POPE, Bashley Lodge, New Milton, Hants, for Prattle of Bashley 5486, British Alpine, born Feb. 8, 1928; s. Feltham Asterus 8117, d. Player of Bashley 5886 by Proud 2853.
 1971 III. (22).—B. Z. WRIGHT, Crabbetts, Hoveton St. John, Wroxham, Norfolk, for Hoveton Foxglove 1860, Anglo-Nubian, born Feb. 11, 1928; s. Theydon Bertrano 1725, d. Hoveton Fennegreek 1618 by Nash Rufus 1450.
 1964 IV. (21).—MISS C. CHAMBERLAIN, for Witch of Westons 8529, British Alpine, born March 9, 1928; s. Wordsworth of Westons 7967, d. Wistful of Westons 4641 by Edenstead Pluck 3007.
 1970 V. (10a).—MISS EMILY SKIDMORE, Ashley Leigh, Box, Wilts, for Heddon Spark 8520, British Saanen, born Feb. 15, 1928; s. Springfield Vitality 89, d. Heddon Spring 5283 by Peter of Bashley 4207.
 1969 R. N.—MISS POPE, for Proof of Bashley.
 H. C.—1959, 1961, 1966. C.—1962.

Milk Yield Classes.

Class 234.—Milk Yield Class, Quality, open to animals entered in Classes 225 to 229.

- 1934 I. (25, Champion,¹ Champion,² & (with 1954) Champion.⁴)—MRS. ARTHUR ABBEY, for Didgemere Dogrose. (See Class 229.)
 1930 II. (23, R. N. for Champion,³ & R. N. for Champion.⁵)—MISS C. CHAMBERLAIN, Westons, Lyndhurst, Hants, for Whimsical of Westons 7051, born March 28, 1925, kidded April 25, 1928; s. Didgemere Dictator 6816, d. Wistful of Westons 4641 by Edenstead Pluck 3007.
 1928 III. (22).—MRS. ARTHUR ABBEY, for Didgemere Dulcette 5956, born April 6, 1923, kidded March 4, 1928; s. Ridgeway Rama 4713, d. Didgemere Dulce 4293 by Prophet of Bashley 3775.
 1925 IV. (21).—MRS. ARTHUR ABBEY, for Didgemere Della. (See Class 228.)
 1927 V. (10a., & (with 1943) R. N. for Champion.⁴)—MRS. ARTHUR ABBEY, for Didgemere Drusilla. (See Class 228.)
 1929 R. N.—MRS. ARTHUR ABBEY, for Priestess of Bashley.
 H. C.—1916, 1921, 1933, 1941. C.—1920, 1922, 1932, 1940.
 1921 Cup.⁶—MISS K. PELLY, for Theydon Apricot. (See Class 227.)
 1922 R. N. for Cup.⁶—MISS K. PELLY, for Theydon Butterfly.

Class 235.—Milk Yield Class, Quantity, open to animals entered in Classes 225 to 229.

- 1934 I. (25).—MRS. ARTHUR ABBEY, for Didgemere Dogrose. (See Class 229.)
 1928 II. (23).—MRS. ARTHUR ABBEY, for Didgemere Dulcette. (See Class 235.)
 1930 III. (22).—MISS C. CHAMBERLAIN, for Whimsical of Westons. (See Class 235.)
 1925 IV. (21).—MRS. ARTHUR ABBEY, for Didgemere Della. (See Class 228.)
 1927 V. (10a.).—MRS. ARTHUR ABBEY, for Didgemere Drusilla. (See Class 228.)
 1916 R. N.—MISS EMILY SKIDMORE, for Heddon Sophia. (See Class 226.)
 H. C.—1929, 1933. C.—1940, 1941, 1942.

¹ Bronze Medal, given by the British Goat Society, for the best Goatling.

² The "Dewar" Challenge Trophy, given through the British Goat Society, for the Goat entered in either the General or the Toggenburg section of the Society's Herd Book winning the highest number of points in the Milking Classes.

³ Challenge Certificate, given by the British Goat Society, for the best Dual Purpose Goat.

⁴ The "Dewar" Cup, given through the British Goat Society, for the Exhibitor showing a Female Goat in-Milk, and a Goatling, under certain conditions.

⁵ The "Pomeroy" Challenge Cup, given through the British Goat Society, for the best Anglo-Nubian entered in the Anglo-Nubian section of the Society's Herd Book winning the highest number of points in the Milking Classes.

SHEEP.

Oxford Downs.

Class 236.—Oxford Down Shearling Rams.

- 1970 I. (210, Champion,¹ & Champion²), 1981 II. (25), 1980 III. (23), & 1982 V. (21.)—HUGH WILLIAM STILGON, The Grounds, Adderbury, Banbury.
1976 IV. (22), & 1975 R. N.—WILLIAM HENRY HITCH, Elkstone Manor, Cheltenham.
H. C.—1972, 1974. C.—1977.

Class 237.—Oxford Down Ram Lambs.

- 1991 I. (210, & R. N. for Champion³)—HOBBS & DAVIS, Kelmscott, Lechlade.
1988 II. (25.)—MAJOR R. F. FULLER, Great Chalfield, Melksham, Wilts.
1986 III. (23.)—HENRY AKERS & Co., Moat House, Black Bourton, Oxford.
1996 IV. (22.)—W. F. G. WATTS, Elsfield, Oxford.
1992 R. N.—THOMAS RICH & SON, Aldsworth, Cheltenham.
H. C.—1986, 1987, 1994. C.—1989, 1990.

Class 238.—Three Oxford Down Ram Lambs.

- 2000 I. (210.)—HOBBS & DAVIS, Kelmscott, Lechlade.
1996 II. (25.)—HENRY AKERS & Co., Moat House, Black Bourton, Oxford.
2005 III. (23.)—W. F. G. WATTS, Elsfield, Oxford.
1997 IV. (22.)—E. G. CLIFFORD, Manley Farm, Quenington, Fairford.
1998 R. N.—MAJOR R. F. FULLER, Great Chalfield, Melksham, Wilts.
H. C.—1999, 2004. C.—2002, 2003.

Class 239.—Three Oxford Down Shearling Ewes.

- 2007 I. (210, R. N. for Champion,⁴ & Champion⁵)—HUGH WILLIAM STILGON, The Grounds, Adderbury, Banbury.
2009 II. (25.)—W. F. G. WATTS, Elsfield, Oxford.
2006 III. (23.)—E. G. CLIFFORD, Manley Farm, Quenington, Fairford.

Class 240.—Three Oxford Down Ewe Lambs.

- 2018 I. (210, & R. N. for Champion⁶)—W. F. G. WATTS, Elsfield, Oxford.
2010 II. (25.)—HENRY AKERS & Co., Moat House, Black Bourton, Oxford.
2014 III. (23.)—HOBBS & DAVIS, Kelmscott, Lechlade.
2013 IV. (22.)—W. B. GANTLETT & SON, Manor Farm, Fairford.
2011 R. N.—E. G. CLIFFORD, Manley Farm, Quenington, Fairford. H. C.—2017.

Shropshires.

Class 241.—Shropshire Two Shear Rams.

- 2019 I. (210, & R. N. for Champion⁷)—LT.-COL. E. C. ATKINS, Stretton House, Hinckley, for Stretton Royal.
2024 II. (25.)—THOS. A. BUTTAR, Corston, Coupar Angus, for Corston Masterpieces.
2021 III. (23.)—CAPT. F. B. F. BISHY, Hardwicke Grange, Shrewsbury, for Hardwicke Duke.
2025 IV. (22.)—JOHN MINTON, Dryton, Wroxeter, Shrewsbury, for Dryton Idler.
2030 V. (21.)—E. CRAIG TANNER, Eytton-on-Severn, Wroxeter, for Royal Newport.
2026 R. N.—WILLIAM EVERALL, Shrawardine Castle, Shrewsbury, for Shraden Type.
H. C.—2022, 2027. C.—2020, 2023.

Class 242.—Shropshire Shearling Rams.

- 2041 I. (210, Champion,⁸ & Champion⁹)—NORMAN J. NUNNERLEY, Tern Hill House, Market Drayton.
2045 II. (25.)—E. CRAIG TANNER, Eytton-on-Severn, Wroxeter, Salop.
2034 III. (23.)—CAPT. F. B. F. BISHY, Hardwicke Grange, Shrewsbury.
2037 IV. (22.) & 2036 V. (21.)—THOS. A. BUTTAR, Corston, Coupar Angus.
2038 R. N.—WILLIAM EVERALL, Shrawardine Castle, Shrewsbury.
H. C.—2038, 2035. C.—2039, 2044.

¹ The "Chalfield" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best Male exhibit.

² The "Heythrop" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best exhibit.

³ The "Great Kington" Silver Challenge Cup, given through the Oxford Down Sheep Breeders' Association, for the best Female exhibit.

⁴ Champion Silver Medal, given by the Shropshire Sheep Breeders' Association, for the best Ram in Classes 241 and 242.

⁵ The "Naton" Silver Challenge Cup, given through the Shropshire Sheep Breeders' Association, for the best exhibit.

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Class 243.—Three Shropshire Shearling Rams.¹

- 2048 I. (£10, & R. N. for Champion.)—THOS. A. BUTTAR, Corston, Coupar Angus.
 2052 II. (£5.)—NORMAN J. NUNNERLEY, Tern Hill House, Market Drayton.
 2053 III. (£3.)—E. CRAIG TANNER, Eyton-on-Severn, Wroxeter, Salop.
 2050 IV. (£2.)—MRS. INGE, Thorpe, Tamworth.
 2051 R. N.—JOHN MINTON, Dryton, Wroxeter, Shrewsbury.
 H. C.—2047, 2049. C.—2045.

Class 244.—Three Shropshire Ram Lambs.

- 2061 I. (£10.)—E. CRAIG TANNER, Eyton-on-Severn, Wroxeter, Salop.
 2059 II. (£5.)—NORMAN J. NUNNERLEY, Tern Hill House, Market Drayton.
 2060 III. (£3.)—MAJOR J. W. RITCHIE, Tern, Wellington, Salop.
 2058 R. N.—MRS. INGE, Thorpe, Tamworth.
 H. C.—2055.

Class 245.—Three Shropshire Shearling Ewes.

- 2064 I. (£10.)—CAPT. F. B. F. BIBBY, Hardwicke Grange, Shrewsbury.
 2066 II. (£5), & 2067 III. (£3.)—MRS. INGE, Thorpe, Tamworth.
 2068 IV. (£2.)—NORMAN J. NUNNERLEY, Tern Hill House, Market Drayton.
 2063 R. N.—LT.-COL. E. C. ATKINS, Stretton House, Hinckley.

Class 246.—Three Shropshire Ewe Lambs.

- 2078 I. (£10.)—E. CRAIG TANNER, Eyton-on-Severn, Wroxeter, Salop.
 2076 II. (£5.)—NORMAN J. NUNNERLEY, Tern Hill House, Market Drayton.
 2075 III. (£3.)—MRS. INGE, Thorpe, Tamworth.
 2077 R. N.—MAJOR J. W. RITCHIE, Tern, Wellington, Salop.
 H. C.—2074.

Southdowns.

Class 247.—Southdown Two Shear Rams.

- 2085 I. (£10, R. N. for Champion,² & R. N. for Champion.³)—LADY LUDLOW, Luton Hoo, Luton, for Luton Hoo 1011 of 1928.
 2086 II. (£5.)—LADY LUDLOW, for Luton Hoo 1024 of 1928.
 2080 III. (£3.)—HIS MAJESTY THE KING, Sandringham, for 102 of 1926.
 2089 IV. (£2.)—J. PIERPONT MORGAN, Wall Hall, Watford, for Aldenham 267 of 1928.
 2090 R. N.—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent, for Godinton 253 of 1928.
 H. C.—2084. C.—2081.

Class 248.—Southdown Shearling Rams.

- 2099 I. (£10, Champion,² & Champion.³), & 2100 R. N.—LADY LUDLOW, Luton Hoo, Luton.
 2097 II. (£5), & 2098 V. (£1.)—JOHN LANGMEAD, Northwood, Ford, Arundel.
 2091 III. (£3.)—HIS MAJESTY THE KING, Sandringham.
 2104 IV. (£2.)—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent.
 H. C.—2094. C.—2103.

Class 249.—Three Southdown Shearling Rams.⁵

- 2114 I. (£10.)—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent.
 2107 II. (£5.)—SIR JEREMIAH COLMAN, BART., Gatton Park, Reigate.
 2105 III. (£3.)—HIS MAJESTY THE KING, Sandringham.
 2113 IV. (£2.)—THE DUKE OF RICHMOND AND GORDON, Goodwood, Chichester, for rams, bred by the late Duke of Richmond and Gordon, K.G.
 2110 R. N.—LADY LUDLOW, Luton Hoo, Luton.
 H. C.—2109. C.—2112.

Class 250.—Three Southdown Ram Lambs.

- 2118 I. (£10.)—THE EARL OF DERBY, K.G., Hatchfield Farm, Newmarket.
 2119 II. (£5.)—LADY FITZGERALD, Buckland House, Faringdon, Berks.

¹ Prizes, except Fourth, given by the Shropshire Sheep Breeders' Association.

² The "Eaton" Silver Challenge Cup, given through the Shropshire Sheep Breeders' Association, for the best exhibit.

³ Champion Gold Medal, or £10 10s. in cash, given by the Southdown Sheep Society, for the best Ram in Classes 247 and 248.

⁴ The "Northumberland" Perpetual Silver Challenge Cup, given through the Southdown Sheep Society, for the best exhibit.

⁵ Prizes, except Fourth, given by the Southdown Sheep Society

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- 2115 III. (23).—HIS MAJESTY THE KING, Sandringham.
 2120 IV. (22).—JOHN LANGMEAD, Northwood, Ford, Arundel.
 2121 R. N.—LADY LUDLOW, Luton Hoo, Luton.
 H. C.—2117. C.—2123.

Class 251.—Three Southdown Shearling Ewes.

- 2133 I. (210, & Champion.)—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent.
 2132 II. (25).—J. PIERPONT MORGAN, Wall Hall, Watford.
 2128 III. (23).—SIR JEREMIAH COLMAN, BART., Gattton Park, Reigate
 2126 R. N.—HIS MAJESTY THE KING, Sandringham.
 C.—2130.

Class 252.—Three Southdown Ewe Lambs.

- 2134 I. (210, & R. N. for Champion.)—HIS MAJESTY THE KING, Sandringham.
 2144 II. (25).—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent.
 2130 III. (23).—JOHN LANGMEAD, Northwood, Ford, Arundel.
 2138 IV. (22).—LADY FITZGERALD, Buckland House, Faringdon, Berks.
 2137 R. N.—THE EARL OF DERBY, K.G., Hatchfield Farm, Newmarket.
 C.—2140.

Hampshire Downs.

Class 253.—Hampshire Down Shearling Rams.

- 2150 I. (210).—MAJOR and MRS. JERVOISE, Herriard Park, Basingstoke.
 2153 II. (25).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, Herts.
 2148 III. (23).—JAMES GOLDSMITH, Blendworth, Horndean, Cosham, Hants.
 2154 IV. (22).—COL. C. W. SOFER WHITBURN, Ampert St. Mary, Andover.
 2147 R. N.—E. CLIFTON-BROWN, Burnham Grove, Burnham, Bucks, for Burnham Tishy 5th.
 H. C.—2149. C.—2152.

Class 254.—Hampshire Down Ram Lambs.

- 2158 I. (210).—JAMES GOLDSMITH, Blendworth, Horndean, Cosham, Hants.
 2159 II. (25).—MAJOR and MRS. JERVOISE, Herriard Park, Basingstoke.
 2163 III. (23).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring.
 2156 IV. (22).—MAJOR V. S. BLAND, The Warren, Aldbourne, Wilts.
 2164 R. N.—COL. C. W. SOFER WHITBURN, Ampert St. Mary, Andover.
 H. C.—2155, 2157. C.—2161.

Class 255.—Three Hampshire Down Ram Lambs.

- 2168 I. (210, & Champion.)—JAMES GOLDSMITH, Blendworth, Horndean, Cosham, Hants.
 2172 II. (25).—COL. C. W. SOFER WHITBURN, Ampert St. Mary, Andover.
 2171 III. (23).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, Herts.
 2166 R. N.—MAJOR V. S. BLAND, The Warren, Aldbourne, Wilts.
 H. C.—2169, 2170. C.—2165, 2167.

Class 256.—Three Hampshire Down Shearling Ewes.

- 2170 I. (210), & 2175 II. (25).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring.
 2174 III. (23).—MAJOR and MRS. JERVOISE, Herriard Park, Basingstoke.
 2177 R. N.—WILLIAM TODD, Little Ponton Grange, Grantham.
 H. C.—2173.

Class 257.—Three Hampshire Down Ewe Lambs.

- 2184 I. (210, & R. N. for Champion.)—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, Herts.
 2181 II. (25).—JAMES GOLDSMITH, Blendworth, Horndean, Cosham, Hants.
 2185 III. (23).—COL. C. W. SOFER WHITBURN, Ampert St. Mary, Andover.
 2180 R. N.—E. CLIFTON-BROWN, Burnham Grove, Burnham, Bucks.
 H. C.—2182, 2183. C.—2178, 2179.

Suffolks.

Class 258.—Suffolk Two Shear Rams.

- 2186 I. (210).—EWER & PAWSKY, Clay Pitts, Foxearth, Long Melford, for Grange Trumpeter 19560, bred by H. E. Smith, Walton, Suffolk.
 2187 II. (25).—EWER & PAWSKY, for Grange Walton 2nd 19559, bred by H. E. Smith, Walton, Suffolk.

¹ Champion Silver Medal, or £1 in cash, given by the Southdown Sheep Society, for the best Pen of Ewes or Ewe Lambs.

² Champion Prize of £10, given by the Hampshire Down Sheep Breeders' Association, for the best exhibit.

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Class 259.—Suffolk Shearling Rams.

- 2192 I. (£10.)—EWER & PAWSEY, Clay Pits, Foxearth, Long Melford, for Foxearth Walton 3rd 20171.
 2188 II. (£5.)—MAJOR R. L. BARCLAY, C.B.E., Higham, Bury St. Edmunds, for Grange Superior 3rd 20027, bred by H. E. Smith, Trimley House, Trimley.
 2200 III. (£3.)—FRANK SAINSBURY, Blunts Hall, Little Wratting, Haverhill, Suffolk, for Carlton Falcon 20449, bred by the Exors. of Sir Ernest Cassel, Carlton Grange, Newmarket.
 2198 IV. (£2.)—R. H. FOA, Holywell Park, Wrotham, Kent, for Holywell Punch.
 2195 V. (£1.)—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk, for Grange Super Quality 2nd 20275, bred by H. E. Smith, Trimley House, Trimley.
 2189 R. N.—MAJOR R. L. BARCLAY, C.B.E., for Grange Fashion 1st.

Class 260.—Suffolk Ram Lambs.

- 2214 I. (£10.)—W. C. JACKSON, Fowlmora, Cambs.
 2210 II. (£5.)—G. A. GOODCHILD, Great Yeldham Hall, Essex.
 2215 III. (£3.)—A. PRESTON JONES, Mickleover House, Derby.
 2204 IV. (£2.)—CAPT. A. CUNNINGHAM-REID, M.P., Carlton Grange, Brinkley, Newmarket.
 2205 V. (£1.)—EWER & PAWSEY, Clay Pits, Foxearth, Long Melford.
 2207 R. N.—R. H. FOA, Holywell Park, Wrotham, Kent.

Class 261.—Three Suffolk Ram Lambs.¹

- 2227 I. (£10.)—G. A. GOODCHILD, Great Yeldham Hall, Essex.
 2224 II. (£5.)—EWER & PAWSEY, Clay Pits, Foxearth, Long Melford.
 2225 III. (£3.)—R. H. FOA, Holywell Park, Wrotham, Kent.
 2223 IV. (£2.)—CAPT. A. CUNNINGHAM-REID, M.P., Carlton Grange, Brinkley, Newmarket.
 2225 V. (£1.)—FRANK SAINSBURY, Blunts Hall, Little Wratting, Haverhill.
 2222 R. N.—MAJOR R. L. BARCLAY, C.B.E., Higham, Bury St. Edmunds.

Class 262.—Three Suffolk Shearling Ewes.

- 2240 I. (£10, & Champion.*)—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk.
 2242 II. (£5.)—A. PRESTON JONES, Mickleover House, Derby.
 2238 III. (£3.)—MAJOR R. L. BARCLAY, C.B.E., Higham, Bury St. Edmunds.
 2243 R. N.—JOHN R. KEEBLE, Brantham Hall, Manningtree, Essex.

Class 263.—Three Suffolk Ewe Lambs.

- 2253 I. (£10, & R. N. for Champion.*)—SIR PRINCE PRINCE-SMITH, BART., Southburn House, Driffield.
 2252 II. (£5.)—JOHN R. KEEBLE, Brantham Hall, Manningtree, Essex.
 2249 III. (£3.)—W. C. JACKSON, Fowlmora, Cambs.
 2244 IV. (£2.)—CAPT. A. CUNNINGHAM-REID, M.P., Carlton Grange, Brinkley, Newmarket.
 2248 V. (£1.)—G. R. C. FOSTER, Anstey Hall, Trumpington, Cambridge.
 2248 R. N.—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk.
 H. C.—2254. C.—2247.

Dorset Downs.

Class 264.—Dorset Down Rams, Shearling and upwards.

- 2259 I. (£10, & Champion.*)—P. and C. SEWARD, Weston, Petersfield, for ram born in 1927.
 2256 II. (£5.)—MRS. LIONEL DE ROTHSCHILD, Exbury, Southampton, for ram born in 1927.
 2260 III. (£3.)—RANDOLPH TORY, Charlsworth Manor, Blandford, for ram born in 1927.
 2258 R. N.—H. S. HORNE, Aldsworth, Emsworth, Hants.

Class 265.—Dorset Down Ram Lambs.⁴

- 2267 I. (£10, & R. N. for Champion*), & 2265 R. N.—P. and C. SEWARD, Weston, Petersfield.
 2272 II. (£5.) & 2271 IV. (£3.)—ROBERT N. TORY, Anderson, Blandford.
 2270 III. (£3.)—RANDOLPH TORY, Charlsworth Manor, Blandford.
 2263 V. (£1.)—HOOPER BROS., Newburgh Farm, Winfrith, Dorset.

Class 266.—Dorset Down Shearling Ewes.

- 2273 I. (£10.)—MRS. LIONEL DE ROTHSCHILD, Exbury, Southampton.
 2276 II. (£5.)—HOOPER BROS., Newburgh Farm, Winfrith, Dorset.
 2278 III. (£3.)—LEONARD TORY, Turnworth, Blandford.
 2282 IV. (£2.)—ROBERT N. TORY, Anderson, Blandford.
 2281 R. N.—RANDOLPH TORY, Charlsworth Manor, Blandford.
 H. C.—2279, 2280.

¹ Prizes, except Fourth and Fifth, given by the Suffolk Sheep Society.

² Perpetual Challenge Plate and £5 in cash, given by the Suffolk Sheep Society, for the best exhibit.

³ Champion Prize of £5, given by the Dorset Down Sheep Breeders' Association, for the best exhibit.

⁴ Prizes, except Fourth and Fifth, given by the Dorset Down Sheep Breeders' Association.

Wiltshire or Western Horns.

Class 270.—Wiltshire or Western Horn Rams, Two Shear and upwards.¹

- 2286 I. (£10, & Champion.)—J. S. ROADS, Norduck House, Aston Abbotts, Aylesbury, for Beauchampton Uhlan 1838, born in 1928, bred by G. Verey, Beauchampton, Stony Stratford.
 2287 II. (£5.)—W. B. SOUTHERNWOOD, Gubblecote, Tring, for Griffins Malvollo, born in 1924, bred by H. Griffin, Hulcote, Aylesbury.
 2284 III. (£3.)—WILLIAM EVANS, Orchard Farm, Yelvertoft, Rugby, for Hoggeston 11/24 882, born in 1924, bred by J. B. Morris, Hoggeston, Winslow, Bucks.
 2285 R. N.—B. MORRIS & SONS, Hoggeston, Winslow, Bucks, for Hoggeston Hero.

Class 271.—Wiltshire or Western Horn Shearling Rams.

- 2288 I. (£10, & R. N. for Champion.)—ROBERT CAMPION, Burnthurst, Princethorpe, Rugby, for Dunchurch Stonehenge, bred by J. Hart Campion, Hensboro Hill, Dunchurch, Rugby.
 2291 II. (£5.)—A. GOWLING, Snowford Hall, Leamington Spa, for Snowford Eclipse 1963.
 2289 III. (£3.)—ROBERT CAMPION, for Hulcote Stonehenge, bred by G. Verey, Hulcote, Towcester.
 2293 R. N.—W. B. SOUTHERNWOOD, Gubblecote, Tring, for Upton Supreme, bred by S. K. Spokes, Upton Lodge, Northampton.

Class 272.—Two Wiltshire or Western Horn Shearling Ewes.

- 2295 I. (£10.)—CHARLES EDWIN GILBY, Spratton, Northampton, for ewes bred by Henry Atterbury, Sharley Cop, Ravensthorpe, Northampton.
 2298 II. (£5.)—W. B. SOUTHERNWOOD, Gubblecote, Tring.
 2296 III. (£3.)—A. GOWLING, Snowford Hall, Leamington Spa, for ewes, bred by J. S. Roads, Norduck House, Aston Abbotts, Aylesbury.
 2297 R. N.—THE EXORS. OF LEWIS LEWIS, Manor Farm, Crick, Rugby.

Ryelands.

Class 273.—Ryeland Rams, Two Shear and upwards.

- 2305 I. (£10.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for Thomas's Juryman 2171, born in 1928, bred by D. J. Thomas, Monachty, Abergavenny.
 2301 II. (£5.)—E. W. LANGFORD, LTD., Wye Bridge, Hereford, for Pomona Tenbury, born in 1925.
 2304 III. (£3.)—W. W. WOOLLAND, for Pride of Marriage Hill 2123, born in 1926, bred by T. L. Martin, Ashe Warren, Overton, Hants.
 H. C.—2302.

Class 274.—Ryeland Shearling Rams.

- 2300 I. (£10, & Champion.)—E. W. LANGFORD, LTD., Wye Bridge, Hereford, for Pomona Harvest.
 2313 II. (£5, & R. N. for Champion.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for Berrington Fluff 1996, bred by Lord Cawley, Berrington Hall, Leominster.
 2312 III. (£3.)—DAVID J. THOMAS, Monachty, Abergavenny, Mon., for Thomas's Knight.
 2306 IV. (£2.)—W. G. BUCHANAN, Manor House Farm, Abergavenny, Mon., for Gobion Eligible 2073.
 2310 R. N.—E. W. LANGFORD, LTD., for Pomona Honesty.
 H. C.—2307.

Class 275.—Three Ryeland Ram Lambs.

- 2318 I. (£10.)—E. W. LANGFORD, LTD., Wye Bridge, Hereford.
 2319 II. (£5.)—DAVID J. THOMAS, Monachty, Abergavenny, Mon.
 2317 III. (£3.)—HUBERT GROOM, Warham, Wells, Norfolk.
 2320 R. N.—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts.
 H. C.—2315.

Class 276.—Three Ryeland Shearling Ewes.

- 2323 I. (£10.)—E. W. LANGFORD, LTD., Wye Bridge, Hereford.
 2321 II. (£5.)—W. G. BUCHANAN, Manor House Farm, Abergavenny, Mon.
 2324 III. (£3.)—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts.

¹ Prizes given by the Wiltshire or Western Horn Sheep Society.

² Silver Challenge Cup, given by the Wiltshire or Western Horn Sheep Society, for the best exhibit.

³ Silver Challenge Cup, given through the Ryeland Flock Book Society for the best Shearling Ram.

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Class 277.—Three Ryeland Ewe Lambs.

- 2328 I. (£10).—E. W. LANGFORD, LTD., Wye Bridge, Hereford.
 2329 II. (£5).—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts.
 2327 III. (£3).—HUBERT GROOM, Warham, Wells, Norfolk.
 2325 R. N.—W. G. BUCHANAN, Manor House Farm, Abergavenny, Mon.

Kerry Hill (Wales).

Class 278.—Kerry Hill (Wales) Rams, Two Shear and upwards.

- 2339 I. (£10, & Champion.¹)—THOMAS WILLIAMS, The Gaer, Forden, Welshpool, for Winsbury Interest 12893, born in 1926, bred by J. T. Bevan, Winsbury, Chirbury.
 2337 II. (£5).—JOHN W. OWENS, Woodhouse, Shobdon, Herefordshire, for Winsbury Influence 12869, born in 1926, bred by J. T. Bevan, Winsbury, Chirbury.
 2331 III. (£3).—BEN ALDERSON, Glanmihell, Kerry, Mont., for Llanshay Gem 12478, born in 1926, bred by James Price, Llanshay, Knighton, Radnor.
 2335 IV. (£2).—THE MARQUESS OF LONDONDERRY, K.G., Plas, Machynlleth, Mont., for Maesmawr Umpire 11544, born in 1925, bred by J. Kinsey, Maesmawr, Caersws, Mont.
 H. C.—2338. C.—2333.

Class 279.—Kerry Hill (Wales) Shearling Rams.

- 2345 I. (£10).—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, for St. Fagans Chancellor.
 2347 II. (£5).—CAPT. J. M. NAYLOR, Leighton Hall, Welshpool, for Leighton Knave.
 2340 III. (£3).—BEN ALDERSON, Glanmihell, Kerry, Mont., for Kerry Artist.
 2351 IV. (£2).—MRS. E. TATE, Swinford Lodge, Rugby, for Swinford Lord Leicester.
 2343 V. (£1).—BROGYNTYN ESTATE COMPANY, Brogyntyn Home Farm, Oswestry, for Brogyntyn Vocalist, bred by Lord Harlech, C.B., Brogyntyn, Oswestry.
 2352 R. N.—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., Eaton Hall, Chester, for Eaton Stamper.
 H. C.—2348. C.—2341.

Class 280.—Kerry Hill (Wales) Ram Lambs.

- 2363 I. (£10).—THE MARQUESS OF LONDONDERRY, K.G., Plas, Machynlleth, Mont.
 2368 II. (£5).—THOMAS WILLIAMS, The Gaer, Forden, Welshpool, for Gaer Jupiter.
 2365 III. (£3).—H. C. FIKKINGTON, Bryntanat, Llansantffraid, Mont.
 2360 IV. (£2).—MAJOR J. G. DUGDALE, Whiteway Farm, Cirencester.
 2362 V. (£1), & 2361 R. N.—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, Cardiff.
 H. C.—2359. C.—2366.

Class 281.—Three Kerry Hill (Wales) Shearling Ewes.

- 2370 I. (£10, & R. N. for Champion.¹)—BROGYNTYN ESTATE COMPANY, Brogyntyn Home Farm, Oswestry, for ewes, bred by Lord Harlech, C.B., Brogyntyn, Oswestry.
 2374 II. (£5).—CAPT. J. M. NAYLOR, Leighton Hall, Welshpool.
 2378 III. (£3).—THE DUKE OF WESTMINSTER, G.C.V.O., D.S.O., Eaton Hall, Chester.
 2369 IV. (£2).—MISS ROSALIE B. BABCOCK, Shawlands, Lingfield, Surrey, for ewes, bred by Ben Alderson, Glanmihell, Kerry, Mont.
 2372 R. N.—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, Cardiff.
 H. C.—2377. C.—2375.

Class 282.—Three Kerry Hill (Wales) Ewe Lambs.²

- 2384 I. (£10).—THE MARQUESS OF LONDONDERRY, K.G., Plas, Machynlleth, Mont.
 2382 II. (£5).—MAJOR J. G. DUGDALE, Whiteway Farm, Cirencester.
 2388 III. (£3).—MRS. E. TATE, Swinford Lodge, Rugby.
 2389 IV. (£2).—THOMAS WILLIAMS, The Gaer, Forden, Welshpool.
 2383 R. N.—SIR DAVID R. LLEWELLYN, BART., The Court, St. Fagans, Cardiff.
 H. C.—2387. C.—2386.

Lincolns.

Class 286.—Lincoln Two Shear Rams.

- 2392 I. (£10).—CLIFFORD NICHOLSON, Worlaby House, Brigg, for Horkstow Manor No. 52.
 2394 II. (£5).—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs, for Croxby Constitution, bred by Rawnsley & Tindall, Well Vale, Alford.
 2391 III. (£3).—CLIFFORD NICHOLSON, for Horkstow Manor No. 26.
 2390 R. N.—ERNEST ADDISON, Riby Grange, Stallingsboro', for Riby Grange Quality.

¹ Silver Challenge Cup, given through the Kerry Hill (Wales) Flock Book Society, for the best exhibit.

² Prizes, except Fourth, given by the Kerry Hill (Wales) Flock Book Society.

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Class 287.—*Lincoln Shearling Rams.*

- 2407 I. (£10, & Champion ¹), & 2406 R. N.—CLIFFORD NICHOLSON, Worlaby House, Brigg.
2399 II. (£5, & R. N. for Champion.²)—JOSEPH BROCKLEBANK, Carlton-le-Moorland, Lincoln.
2406 III. (£3), & 2397 V. (£1).—ERNEST ADDISON, Riby Grange, Stallingboro'.
2409 IV. (£2).—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs.
H. C.—2398, 2400.

Class 288.—*Three Lincoln Shearling Rams.*³

- 2414 I. (£15).—H. G. DEAN, Heath House, Nocton, Lincoln, for rams bred by J. H. Dean & Sons, Heath House.
2418 II. (£10).—CLIFFORD NICHOLSON, Worlaby House, Brigg, Lincs.
2412 III. (£5).—JOSEPH BROCKLEBANK, Carlton-le-Moorland, Lincoln.
2420 IV. (£3).—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs.
2422 R. N.—GEO. WARD, Manor House, Quarrington, Sleaford, Lincs.
H. C.—2411, 2417.

Class 289.—*Three Lincoln Ram Lambs.*

- 2423 I. (£10).—ERNEST ADDISON, Riby Grange, Stallingboro'.
2430 II. (£5).—CLIFFORD NICHOLSON, Worlaby House, Brigg, Lincs.
2426 III. (£3), & 2426 IV. (£2).—H. G. DEAN, Heath House, Nocton, Lincoln, for lambs bred by J. H. Dean & Sons, Heath House.
2432 R. N.—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs.

Class 290.—*Three Lincoln Shearling Ewes.*

- 2433 I. (£10), & 2434 II. (£5).—ERNEST ADDISON, Riby Grange, Stallingboro'.
2435 III. (£3).—CLIFFORD NICHOLSON, Worlaby House, Brigg, Lincs.

Class 291.—*Three Lincoln Ewe Lambs.*

- 2438 I. (£10), & 2430 R. N.—ERNEST ADDISON, Riby Grange, Stallingboro'.
2441 II. (£5), & 2442 III. (£3).—H. G. DEAN, Heath House, Nocton, Lincoln, for lambs bred by J. H. Dean & Sons, Heath House.
2444 IV. (£2).—CLIFFORD NICHOLSON, Worlaby House, Brigg, Lincs.
H. C.—2446.

Leicesters.

Class 292.—*Leicester Shearling Rams.*

- 2450 I. (£10, & Champion ⁴), & 2451 II. (£5).—WILLIAM JORDAN, Eastburn, Driffield.
2452 III. (£3).—R. MEGGINSON, Garton Field, Driffield.
2449 R. N.—J. and R. HARRISON, Gainford Hall, Gainford S.O., Co. Durham.

Class 293.—*Leicester Ram Lambs.*

- 2455 I. (£10, & R. N. for Champion.⁵)—WILLIAM JORDAN, Eastburn, Driffield.
2458 II. (£5).—C. H. SIMPSON & SONS, Castle House, Hunmanby.
2460 III. (£3).—THE EXORS. OF R. H. STOCKS, Haywold, North Dalton, Driffield.
2457 R. N.—R. MEGGINSON, Garton Field, Driffield.

Class 294.—*Leicester Shearling Ewes.*

- 2467 I. (£10), & 2468 R. N.—THE EXORS. OF R. H. STOCKS, Haywold, North Dalton, Driffield.
2468 II. (£5).—WILLIAM JORDAN, Eastburn, Driffield.
2466 III. (£3).—R. MEGGINSON, Garton Field, Driffield.

Class 295.—*Leicester Ewe Lambs.*

- 2470 I. (£10), & 2471 III. (£3).—WILLIAM JORDAN, Eastburn, Driffield.
2474 II. (£5).—C. H. SIMPSON & SONS, Castle House, Hunmanby.
2469 R. N.—F. W. DENNIS, Crossgates Farm, Seamer, Scarborough, for Seamer Quality.

Wensleydales.

Class 300.—*Wensleydale Rams, Two Shear and upwards.*

- 2479 I. (£10).—JOHN DARGUE, Burneside Hall, Kendal, for Sandgate Blue Champion 3481, born in 1926, bred by Thomas Robinson, Brompton, Northallerton.
2488 II. (£5).—JOHN A. WILLIS, Manor House, Carperby, Yorks, for Royal Newport, born in 1926, bred by John Hoggarth, Manor House, Slynne, Lancaster.

¹ Champion Prize of £5, given by the Lincoln Longwool Sheep Breeders' Association, for the best Ram in Classes 286 and 287.

² Prizes given by the Lincoln Longwool Sheep Breeders' Association.

³ Champion Silver Medal, given by the Leicester Sheep Breeders' Association, for the best exhibit.

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- 2477 III. (23.)—THE MARQUIS OF BUTE, K.T., Dumfries House, Old Cumnock, Ayrshire, for Roseburn Chief 3478, born in 1926.
 2481 R. N.—JAMES C. WADDINGTON, Westwood, 462 Padliham Road, Burnley, for Hellefield (1926) Supreme Champion.

Class 301.—*Wensleydale Shearling Rams.*

- 2485 I. (£10.)—JOHN DARGUE, Burneside Hall, Kendal.
 2489 II. (25.)—JOHN A. WILLIS, Manor House, Carperby, Yorks.
 2488 III. (23.)—JAMES C. WADDINGTON, Westwood, 462 Padliham Road, Burnley, for Wheatley R.R. 3585, bred by Redmayne Rigg, High Fell Gate, Grange-over-Sands.
 2487 R. N.—J. B. SMALLEY, Birkby Hall, Cark-in-Cartmel.

Class 302.—*Three Wensleydale Shearling Rams.*

- 2493 I. (£10.)—JOHN A. WILLIS, Manor House, Carperby, Yorks.
 2491 II. (25.)—JOHN DARGUE, Burneside Hall, Kendal.

Class 303.—*Wensleydale Shearling Ewes.*

- 2499 I. (£10.) & 2500 II. (25.)—JOHN A. WILLIS, Manor House, Carperby, Yorks.
 2495 III. (23.)—J. B. SMALLEY, Birkby Hall, Cark-in-Cartmel, for ewe, bred by W. L. Clarkson, Lundholme, Ingelton, Carnforth.
 2496 R. N.—J. B. SMALLEY, for ewe, bred by W. T. Milner, Slyne Hall, Lancaster.

Class 304.—*Wensleydale Yearling Ewes, shown in Wool.*¹

- 2503 I. (£10.)—J. B. SMALLEY, Birkby Hall, Cark-in-Cartmel.
 2504 II. (25.)—JOHN A. WILLIS, Manor House, Carperby, Yorks, for ewe, bred by T. B. Sutton, Blackwell, Darlington.
 2502 III. (23.)—J. B. SMALLEY, for ewe, bred by John A. Willis, Manor House, Carperby.

Kent or Romney Marsh.

Class 305.—*Kent or Romney Marsh Two Shear Rams.*

- 2509 I. (£10.)—ASHLEY STEVENS, Davington Hall, Faversham, for Luddenham No. 57 of 1926 65644.
 2508 II. (25.)—J. EGERTON QUESTED, The Firs, Cheriton, Kent, for Quested's No. 281 of 1926 64899.
 2506 III. (23.)—J. EGERTON QUESTED, for Quested's No. 193 of 1926 64839.
 2507 R. N.—J. EGERTON QUESTED, for Quested's No. 240 of 1926 64868.
 H. C.—2505.

Class 306.—*Kent or Romney Marsh Shearling Rams.*

- 2521 I. (£10, & Champion *), & 2520 V. (£1.)—ASHLEY STEVENS, Davington Hall, Faversham.
 2517 II. (25, & R. N. for Champion *), 2518 IV. (23), & 2516 R. N.—J. EGERTON QUESTED, The Firs, Cheriton, Kent.
 2513 III. (23.)—W. MILLER, Renville, Canterbury.
 H. C.—2512. G.—2511.

Class 307.—*Three Kent or Romney Marsh Shearling Rams.*²

- 2526 I. (£20), & 2527 R. N.—J. EGERTON QUESTED, The Firs, Cheriton, Kent.
 2523 II. (£15), & 2529 IV. (25.)—ASHLEY STEVENS, Davington Hall, Faversham, Kent.
 2522 III. (£10.)—E. W. BAKER, Parsonage Farm, Bakesbourne, Canterbury.

Class 308.—*Three Kent or Romney Marsh Ram Lambs.*

- 2536 I. (£10), & 2535 II. (25.)—J. EGERTON QUESTED, The Firs, Cheriton, Kent.
 2532 III. (23.)—W. MILLER, Renville, Canterbury.
 2531 R. N.—THE EARL OF GUILFORD, Waldershare Park, Dover.
 H. C.—2537.

Class 309.—*Three Kent or Romney Marsh Shearling Ewes.*

- 2540 I. (£10, & R. N. for Champion *), & 2541 III. (23.)—J. EGERTON QUESTED, The Firs, Cheriton, Kent.
 2543 II. (25.)—ASHLEY STEVENS, Davington Hall, Faversham.

Class 310.—*Three Kent or Romney Marsh Ewe Lambs.*

- 2549 I. (£10, & Champion *), & 2550 II. (25.)—J. EGERTON QUESTED, The Firs, Cheriton, Kent.

¹ Prizes given by the Wensleydale Longwool Sheep Breeders' Association.

² Champion Prize of £10 10s., given by the Kent or Romney Marsh Sheep Breeders' Association, for the best Ram in Classes 305 and 306.

³ Prizes given by the Kent or Romney Marsh Sheep Breeders' Association.

⁴ Champion Prize of £10 10s., given by the Kent or Romney Marsh Sheep Breeders' Association, for the best Pen of Ewes or Ewe Lambs.

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- 2547 III. (23.)—W. MILLER, Renville, Canterbury.
 2548 R. N.—THE EARL OF GUILFORD, Waldershare Park, Dover.

Welsh Mountain.

Class 315.—Welsh Mountain Rams, Shearling and upwards.

- 2551 I. (£10.)—MAJOR ERIC J. W. PLATT, Madryn Farm, Aber, Bangor, for Dyserth V. 5 2586, born in 1926, bred by R. Ivor Roberts, Dyserth Hall, Dyserth.
 2553 II. (25.)—ROBERT ROBERTS & SON, Arllen Fawr, Llanrhaladr, Oswestry, for Arllen T. 1, born in 1925.
 2555 III. (23.)—UNIVERSITY COLLEGE OF NORTH WALES, College Farm, Aber, Bangor, for Snowdon T. 15 2219, born in 1925.
 2554 R. N.—ROBERT ROBERTS & SON, for Arllen X. 1.

Class 316.—Three Welsh Mountain Shearling Ewes.

- 2561 I. (£10), & 2562 R. N.—UNIVERSITY COLLEGE OF NORTH WALES, College Farm, Aber Bangor.
 2560 II. (25.)—ROBERT ROBERTS & SON, Arllen Fawr, Llanrhaladr, Oswestry.
 2557 III. (23.)—EDWARD JONES, Castell, Llanrhaladr, Oswestry.

PIGS.

[The numbers in brackets refer to the Tattoo or Ear Numbers of the animals.]

Large Whites.

Class 319.—Large White Boars, born in or before 1926.

- 2570 I. (£10, & Champion,¹ & R. N. for Champion.)—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton King David 4th 58135 (360), born Jan. 6, 1926; s. Bourne King David 52nd 47549, d. Walton Primrose 40th 149512 by Worsley Jay 109th 84479.
 2581 II. (25, & R. N. for Champion.)—JOHN H. PENTY, Glebe Farm, Bolton Percy, Yorks, for Bourne King David 219th 55955 (6112), born July 25, 1925, bred by Edmund Wherry, Bourne, Lincs; s. Bourne King David 20th 40527, d. Bourne Champion Queen 5th 76980 by Sapperton Boy 24471.
 2577 III. (23.)—J. PIERPONT MORGAN, Wall Hall, Watford, for Aldenham Brigadier 55669 (1223), born March 27, 1925; s. Aldenham Bertha's Boy 39921, d. Histon Belle 39th 90764 by Histon Eastern Turk 26883.
 2582 IV. (22.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton Bradbury 56487 (290), born May 2, 1926; s. Bourne Bradbury 40429, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33091.
 2572 V. (£1.)—D. W. GUNN, Bonsers Farm, Arnold, Nottingham, for Sherwood Bradbury 6th 57685 (773), born Jan. 6, 1926, bred by Lady Seely, Sherwood Lodge, Arnold; s. Bourne Bradbury 6th 47455, d. Sherwood Catalina 4th 148610 by Bottesford Emperor 17th 40267.
 2585 R. N.—W. WHITE & SON, Pool Farm, Taunton, for Duston Delegate 18th.
 R. C.—2566, 2574. C.—2579.

Class 320.—Large White Boars, born in 1927, before July 1.

- 2589 I. (£10.)—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Turk 36th 62569 (812), born Jan. 1; s. Boxed Turk 33117, d. Lassie of Walton 60204 by Ringleader of Colston 22861.
 2597 II. (25.)—WALTER W. RYMAN, Wall, Lichfield, for Wall Jay 14th 62425 (1440), born Jan. 8; s. Wall Jay 9th 56097, d. Wall Surprise 2nd 178248 by Spalding Jay 11th 42357.
 2596 III. (23.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton King David 46th 60699 (534), born Jan. 8; s. Bourne King David 223rd 55959, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33091.
 2600 IV. (22.)—E. HOLLINSON, Hall Farm, Hutton Wadesley, Marston, Yorks, for Barfield Jay 4th 60057 (448), born March 1, bred by Wm. Wright & Sons, Ltd., 9 Goodramgate, York; s. Bourne Jay 3rd 40497, d. Barfield Queen 102994 by Tockwith Banner 34241.
 2591 V. (£1.)—ALEXANDER W. LEASON, Brook House Farm, Uttoxeter, for Caldmore Merryman (8848), born Jan. 20, bred by R. P. Haynes, Delves Green Farm, Wednesbury; s. Moreton Banner 2nd 57289, d. Caldmore Merrylegs 4th 163356 by Macbeth of Caldmore 43393.
 2592 R. N.—JACK R. MAJOR, 108 High Street, Ramsey, Hunts, for Kirby Bedon Baron 13th.
 R. C.—2594. C.—2602, 2603.

¹ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Large White Boar.

² Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Large White Pig.

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Class 321.—Large White Boars, born in 1927, on or after July 1.¹

- 2613 I. (£10).—E. J. WYTHES, C.B.E., Copped Hall, Epping, for Copped Hall Crusader (551), born July 11; s. Bourne Bradbury 40th 55871, d. Copped Hall Charlotte 145774 by Bourne King David 13th 40517.
- 2611 II. (£5).—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton King David 73rd (920), born Aug. 1; s. Bourne King David 145th 52353, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33001.
- 2605 III. (£3).—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Bandmaster 33rd (1037), born July 1; s. Walton Bandmaster 13th 53873, d. Walton Primrose 50th 161588 by Bourne King David 52nd 47549.
- 2612 IV. (£2).—J. RACKLEY & SONS, for Edmonton King David 74th (921), born Aug. 1; s. Bourne King David 145th 52353, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33001.
- 2606 E. N.—LORD DARESBURY, C.V.O., for Walton King David 43rd.
H. C.—2607, 2609. C.—2604, 2608.

Class 322.—Large White Boars, born in 1928.

- 2622 I. (£10).—DANIEL R. DAYBELL, Bottesford, Nottingham, for Bottesford Bradbury 2nd (947), born Jan. 2; s. Edmonton Bradbury 3rd 56491, d. Bottesford Buttercup 102nd 168076 by Sapperton President 42263.
- 2642 II. (£5).—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton King David 80th (1059), born Jan. 3; s. Bourne King David 223rd 55959, d. Bourne Bonetta 58th 128262 by Breastplate of Bourne 38465.
- 2623 III. (£3).—DANIEL R. DAYBELL, for Bottesford Bradbury 3rd (948), born Jan. 2; s. Edmonton Bradbury 3rd 56491, d. Bottesford Buttercup 102nd 168076 by Sapperton President 42263.
- 2621 IV. (£2).—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Turk 44th (1319), born Jan. 16; s. Walton Turk 36th 62569, d. Whittingham Lady Dorothy 7th 149710 by Macbeth of Caldmore 45393.
- 2648 V. (£1).—E. THOMLINSON, Hall Farm, Hutton Wandesley, Marston, Yorks, for Tockwith Prince George 15th (2352), born Jan. 3; s. Packwood Prince Edward 57453, d. Armadale Champion Queen 7th 156096 by Bourne Jay 3rd 40497.
- 2620 E. N.—LORD DARESBURY, C.V.O., for Walton Turk 37th.
H. C.—2627, 2639. C.—2633, 2638.

Class 323.—Large White Breeding Sows, born in or before 1926.

- 2667 I. (£10, & Champion,* & Champion.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Bourne Bonetta 27th 103300 (5017), born Jan. 1, 1923, farrowed March 6, 1928, bred by Edmund Wherry, Bourne, Lincs; s. Bourne Champion Boy 33091, d. Bourne Bonetta 6th 76950 by Baron of Bourne 28633.
- 2660 II. (£5).—J. PIERPONT MORGAN, Wall Hall, Watford, for Aldenham Queen 24th 156062 (1343), born Aug. 1, 1925, farrowed Jan. 10, 1928; s. Aldenham Bertha's Turk 4th 47225, d. Aldenham B.Q. 88250 by Bourne Cantab 26069.
- 2654 III. (£3).—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Lassie 19th 14974 (58), born Jan. 15, 1925, farrowed Feb. 12, 1928; s. Boxed Turk 33117, d. Lassie of Walton 60206 by Ringleader of Colston 22661.
- 2656 IV. (£2).—ROWLAND P. HAYNES, Delves Green Farm, Wednesbury, Staffs, for Abberton Finella 155894 (997), born Feb. 14, 1926, farrowed April 2, 1928, bred by Morgan & Winterston, Whitmore Street, Walsall; s. Bourne King David 150th 52357, d. Forest Feinella 146550 by Jay of Spring 37231.
- 2666 V. (£1).—ROBERT GRAHAM PEEL, Moreton Hall, Congleton, Cheshire, for Moreton May 7th 159708 (453), born Jan. 7, 1926, farrowed Feb. 24, 1928; s. Bourne Baldwin 52255, d. Moreton May 147876 by Taunton Jay 22nd 48819.
- 2662 E. N.—JOHN NEAVEYSON, The Chestnuts, Peakirk, Peterboro', for Peakirk Mary 5th.
H. C.—2668, 2670. C.—2657, 2661.

Class 324.—Large White Sows, born in 1927, before July 1.

- 2695 I. (£10, & E. N. for Champion.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton Bonetta 6th 169292 (540), born Jan. 8; s. Bourne King David 223rd 55959, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33001.
- 2693 II. (£5).—ROBERT GRAHAM PEEL, Moreton Hall, Congleton, Cheshire, for Moreton Maud 33rd (890), born Feb. 16; s. Bourne Baldwin 52255, d. Moreton Maud 2nd 79962 by Spalding Kingmaker 27221A.
- 2682 III. (£3).—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Bonetta 6th (885), born Jan. 21; s. Dupplin Excellence 56389, d. Bourne Bonetta 108th 156826 by Broker of Bourne 40617.
- 2691 IV. (£2).—J. PIERPONT MORGAN, Wall Hall, Watford, for Aldenham Belle 72nd (1078), born Feb. 6; s. Sundon Bar-None 57815, d. Aldenham Belle 9th 102290 by Aldenham Bright Boy 36077.

¹ Prizes, except Fourth, given by the National Pig Breeders' Association

* Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Large White Pig.

* Champion Gold Medal, given by the National Pig Breeders' Association, for the best Large White Sow.

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- 2690 V. (21.)—J. PIERPONT MORGAN, for Aldenham Belle 71st (1975), born Feb. 6; s. Sundon Bar-None 57815, d. Aldenham Belle 9th 102290 by Aldenham Bright Boy 36077.
 2681 R. N.—LORD DARESBURY, C.V.O., for Walton Arabella 4th.
 H. C.—2689, 2698. C.—2696, 2700.

Class 325.—Large White Sows, born in 1927, on or after July 1.

- 2723 I. (210.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton Bonetta 18th (925), born Aug. 1; s. Bourne King David 145th 52353, d. Bourne Bonetta 27th 103300 by Bourne Champion Boy 33091.
 2711 II. (25.)—ROWLAND P. HAYNES, Delves Green Farm, Wednesbury, Staffs, for Moreton Prim (788), born July 13, bred by R. G. Peel, Moreton Hall, Congleton; s. Bourne Baldwin 52255, d. Moreton Primrose 8th 159730 by Caldmore Banner 4th 36569.
 2717 III. (23.)—J. PIERPONT MORGAN, Wall Hall, Watford, for Aldenham Miss Matilda 3rd (2183), born July 6; s. Bourne Bar-None 290th 40353, d. Aldenham Miss Matilda 150046 by Turk of Aldenham 37811.
 2704 IV. (22.)—LORD DARESBURY, C.V.O., Walton Hall, Warrington, for Walton Lady Dorothy 12th (1068), born July 3; s. Bourne King David 52nd 47549, d. Whittingham Lady Dorothy 7th 149710 by Macbeth of Caldmore 48393.
 2721 V. (21.)—ROBERT GRAHAM PEEL, Moreton Hall, Congleton, Cheshire, for Moreton Perfection 11th (797), born July 18; s. Bourne Baldwin 52255, d. Moreton Maud 12th 147866 by Caldmore Banner 4th 36569.
 2707 R. N.—JOHN FILLINGHAM, George Hotel, Grantham, for Duston Carbonnieux.
 H. C.—2705, 2709. C.—2718, 2720.

Class 326.—Large White Sows, born in 1928.

- 2732 I. (210.)—DANIEL R. DAYBELL, Bottesford, Nottingham, for Bottesford Buttercup 108th (951), born Jan. 2; s. Edmonton Bradbury 3rd 56491, d. Bottesford Buttercup 102nd 168078 by Sapperton President 42263.
 2735 II. (25.)—ERNEST HARDING, Packwood Grange, Dorridge, Warwickshire, for Packwood Sally 57th (2564), born Jan. 1; s. Packwood King David 4th 53405, d. Packwood Sally 35th 130890 by Bourne Bar-None 181st 36289.
 2745 III. (23.)—ROBERT GRAHAM PEEL, Moreton Hall, Congleton, Cheshire, for Moreton May 20th (892), born Jan. 3; s. Bourne Baldwin 5225, d. Moreton May 147876 by Taunton Jay 22nd 45819.
 2756 IV. (22.)—E. THOMLINSON, Hall Farm, Hutton Wandesley, Marston, Yorks, for Tockwith Blackberry 8th (2330), born Jan. 2; s. Packwood Prince Edward 57453, d. Histon Blackberry 2nd 147020 by Aldenham Master 36091.
 2751 V. (21.)—J. RACKLEY & SONS, Hermitage Farm, Silver Street, Edmonton, for Edmonton Bonetta 28th (1064), born Jan. 3; s. Bourne King David 223rd 55959, d. Bourne Bonetta 58th 128262 by Breastplate of Bourne 36465.
 2747 R. N.—JOHN H. PENTY, Glebe Farm, Bolton Percy, Yorks, for Glebe Lucy.
 H. C.—2730, 2737. C.—2733, 2757.
 2596, 2695, 2723, 2751 Special 210.—J. RACKLEY & SONS, for Edmonton King David 46th, Edmonton Bonetta 8th, Edmonton Bonetta 18th, and Edmonton Bonetta 28th.
 2580, 2682, 2705, 2730 Special 25.—LORD DARESBURY, C.V.O., for Walton Turk 36th, Walton Bonetta 8th, Walton Lizzie 33rd, and Walton Bonetta 8th.
 2638, 2693, 2721, 2745 R. N. for Specials.—R. G. PEEL, for Moreton Baldwin 44th, Moreton Maud 33rd, Moreton Perfection 11th, and Moreton May 20th.

Middle Whites.

Class 327.—Middle White Boars, born in or before 1928.

- 2775 I. (210, Champion, & Champion.)—LEOPOLD C. PAGET, Middlethorpe Hall, York, for Wharfedale Alasco 59899 (1112), born Jan. 9, 1926; s. Wharfedale Jerry 51689, d. Wharfedale Silver Queen 143868 by Councillor of Wharfedale 46505.
 2777 II. (25.)—LEOPOLD C. PAGET, for Wharfedale Oinker 51673 (846), born Jan. 18, 1924; s. Illuminator of Wharfedale 44935, d. Wharfedale Phosphorine 126412 by Wharfedale Neptune 35897.
 2772 III. (23.)—VISITING COMMITTEE, CITY OF LONDON MENTAL HOSPITAL, Stone, Dartford, for Hallstone Marquis 3rd 49651 (322), born July 6, 1923, bred by W. Hallas, Bank House Farm, Helsby, Warrington; s. Bookham Marquis 32443, d. Chequer Mona 95126 by Histon Shrewsbury 9th 35179.
 2769 IV. (22.)—W. HALLAS, Bank House Farm, Helsby, Warrington, for Hallstone Marquis 4th 49953 (326), born July 6, 1923; s. Bookham Marquis 32443, d. Chequer Mona 95126 by Histon Shrewsbury 9th 35179.

* Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the National Pig Breeders' Association, for the best groups of four Pigs, bred by Exhibitor, in Classes 320, 321, 322, 324, 325, and 326. One Boar (at least) must be included in each group, and not more than one entry to be selected from any one Class.

* Champion Gold Medal, given by the National Pig Breeders' Association, for the best Middle White Boar.

* Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Middle White Pig.

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- 2767 V. (#1).—MISS ENID GURNER, Chestercourt, Edenbridge, for *Salts Illuminator* 59440 (465), born Jan. 28, 1926, bred by A. Leney, Little Haven, Hythe, Southampton; s. Wharnccliffe Prince 32625, d. Wharfedale Helah 101474 by Wharfedale Deliverance 32575.
2762 R. N.—S. BIDE & SONS, LTD., Pedigree Pig Farm, Farnham, Surrey, for *Khan of Heathenden*.
H. C.—2773. C.—2761.

Class 328.—Middle White Boars, born in 1927, before July 1.

- 2789 I. (#10, & R. N. for Champion.¹)—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, Herts, for *Pendley Apache* (87), born Jan. 13; s. Histon Woodman 28th 59057, d. Whitehall Rover's Choice 155338 by Histon Rover 48th 44581.
2786 II. (#5).—HICKS & SONS, FORDON, Hunmanby, Yorks, for *Fordon Brian* 63101 (657), born Jan. 8; s. Defender of Ypres 43857, d. Fordon Belinda 3rd 96102 by Couthorpe Benedick 31451.
2780 III. (#3).—J. V. BARRY, Buttefant Herd, Little Browns, Edenbridge, for *Buttefant Deliverance* 63031 (12), born March 20; s. Wharfedale Deliverance 32575, d. Amport Choice 9th 162236 by Histon Milpond 35161.
2782 IV. (#2).—CHIVERS & SONS, LTD., Histon, Cambridge, for *Histon Herald* 7th (794), born Jan. 17; s. Hammonds Herald 44353, d. Histon Choice 53rd 137562 by Swell of Histon 39559.
2793 V. (#1).—MRD. HAYES SADLER, Horne Court, Horne, Horley, Surrey, for *Norsbury Hivite* 2nd (1641), born May 9; s. Norsbury Hivite 59267, d. Beenham Hagar 3rd 82390 by Pendley Swell 32183.
2790 R. N.—CAPT. R. F. H. NORMAN and MISS S. WILLIAMS BULKELEY, Bilsborough, Hensfield, Sussex, for *Burningfold Deliverance*.
H. C.—2794. C.—2783.

Class 329.—Middle White Boars, born in 1927, on or after July 1.²

- 2806 I. (#10).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for *Pendley Hooker* (118), born Aug. 20; s. Pendley Herald 55031, d. Whitehill Rover's Choice 2nd by Hammonds Herald 44353.
2796 II. (#5).—MISS ROSALIE B. BARCOCK, Shawlands, Lingfield, Surrey, for *Shawlands Knight* 4th (853), born July 15; s. Whitehill Hasty 3rd 59743, d. Mistley Nightingale 93rd by Hawthorn Sultan 6th 45657.
2801 III. (#3).—CHIVERS & SONS, LTD., Histon, Cambridge, for *Histon Apollo* 5th (990), born July 15; s. Apollo of Wharfedale 43133, d. Histon Choice 51st 137568 by Histon Rover 28075.
2809 IV. (#2).—LEOPOLD C. PAGET, Middlethorpe Hall, York, for *Wharfedale Director* (1470), born July 20; s. Histon Rover 82nd 63423, d. Wharfedale Guiding Light 143862 by Councillor of Wharfedale 46505.
2803 V. (#1).—MISS ENID GURNER, Chestercourt, Edenbridge, for *Salts Prince* 18th (739), born July 1, bred by A. Leney, Little Haven, Hythe, Southampton; s. Wharnccliffe Prince 32625, d. S. lts Holdfast 4th 141708 by Esplane of Shanstone 44061.
2797 R. N.—MISS ROSALIE B. BARCOCK, for *Shawlands Sultan* 11th.
H. C.—2800.

Class 330.—Middle White Boars, born in 1928.

- 2822 I. (#10).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for *Pendley Prince* 6th (125), born Jan. 2; s. Salts Prince 7th, d. Pendley Hollyberry 3rd by Whitehill Hasty 3rd 59743.
2817 II. (#5).—MISS ENID GURNER, Chestercourt, Edenbridge, for *Salts Deliverance* 25th (878), born Jan. 3; s. Salts Deliverance 13th 59441, d. Salts Holdfast 11th 177296 by Wharnccliffe Prince 32625.
2815 III. (#3).—S. BIDE & SONS, LTD., Pedigree Pig Farm, Farnham, Surrey, for *Compton Airman* (994), born Jan. 6; s. Khan of Heathenden 50519, d. Compton Patrina 162980 by Wharnccliffe Master 46847.
2823 IV. (#2).—MAJOR J. A. MORRISON, D.S.O., for *Pendley Prince* 6th (120), born Jan. 2; s. Salts Prince 7th, d. Pendley Hollyberry 3rd by Whitehill Hasty 3rd 59743.
2814 V. (#1).—MISS ROSALIE B. BARCOCK, Shawlands, Lingfield, Surrey, for *Shawlands Woodman* 7th (1010), born Jan. 11; s. Salts Deliverance 16th 59445, d. Mistley Dorothy 192nd 176368 by Woodman of Hawthorn 39751.
2826 R. N.—LEOPOLD C. PAGET, Middlethorpe Hall, York, for *Wharfedale Artful*.
H. C.—2820.

Class 331.—Middle White Breeding Sows, born in or before 1926.

- 2847 I. (#10, & R. N. for Champion.³)—MRS. SOPHR WHITBURN, Amport St. Mary, Andover, for *Amport Choice* 5th 162228 (30), born July 20, 1925, farrowed March 2, 1928; s. Histon Milpond 35161, d. Choice of Pendley 3rd 134738 by Stortford Rover 39509.

¹ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Middle White Boar.

² Prizes, except Fourth and Fifth, given by the National Pig Breeders' Association.

³ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Middle White Sow.

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- 2844 II. (25).—CAPT. R. F. H. NORMAN and MISS S. WILLIAMS BULKELEY, Bilsborough, Hensfold, Sussex, for *Whitehill Hagar's* Choice 10th 143978 (15), born Jan. 19, 1924, farrowed Feb. 12, 1928, bred by Mrs. R. M. Foot, Whitehill, Berkhamsted; s. Hammonds Hasty 44349, d. Hammonds Choice 116534 by Wharfedale Hector 35879.
- 2846 III. (23).—MRS. HAYES SADLER, Horne Court, Horne, Horley, Surrey, for *Norsbury Welcome* 17th 165150 (A370), born Jan. 1, 1925, farrowed Feb. 16, 1928; s. Norsbury Harold 50791, d. Norsbury Welcome 11th 153554 by Norsbury Vaughan 39201.
- 2848 IV. (22).—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for *Ramsbury Rosebud* 2nd 177132 (248), born March 8, 1926, farrowed March 12, 1928; s. Illuminator of Wharfedale 44935, d. Caldmore Rosebud 14th 162808 by Wharfedale Deliverance 32575.
- 2833 V. (21).—MISS ROSALIE B. BABCOCK, Shawlands, Lingfield, Surrey, for *Hammonds Gracious* 13th 163716 (692), born March 15, 1925, farrowed Feb. 29, 1928, bred by H. R. Beeton, Hammonds, Checkendon, Reading; s. Hammonds Hivite 31661, d. Hammonds Gracious 136822 by Wharfedale Hector 35879.
- 2838 R. N.—MISS ENID GURNER, Cheterecourt, Edenbridge, for *Salts Lady Holly*.
H. C.—2845. C.—2834, 2839.

Class 332.—Middle White Sows, born in 1927, before July 1.

- 2867 I. (210, Champion, & R. N. for Champion).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for *Norsbury Hagar* 5th 176658 (1478), born Jan. 15, bred by Mrs. Hayes Sadler, Horne Court, Horne, Horley; s. Caldmore Revel Deliverance 4th 63049, d. Norsbury Hagar 2nd 165122 by Red Deer Raynard 2nd 46141.
- 2858 II. (25).—CHIVERS & SONS, LTD., Histon, Cambridge, for *Histon Woodlands* 6th 175918 (773), born Jan. 1; s. Hammonds Herald 44353, d. Ayle Woodlands 150088 by Peene Slasher 45849.
- 2863 III. (23).—MISS ENID GURNER, Cheterecourt, Edenbridge, for *Salts Lilac* 4th (861), born Jan. 6, bred by A. Leney, Little Haven, Hythe, Southampton; s. Wharfedale Deliverance 32575, d. Burford Lilac 3rd 150522 by Pendley Joker 45871.
- 2859 IV. (22).—CHIVERS & SONS, LTD., for *Histon Woodlands* 7th 175918 (777), born Jan. 1; s. Hammonds Herald 44353, d. Ayle Woodlands 150088 by Peene Slasher 45849.
- 2873 V. (21).—MRS. HAYES SADLER, Horne Court, Horne, Horley, Surrey, for *Norsbury Pamela* 4th (1539), born Feb. 1; s. Godinton Prince 44177, d. Abberton Pamela 17th 132846 by Norsbury Scotty 39197.
- 2854 R. N.—MISS ROSALIE B. BABCOCK, Shawlands, Lingfield, Surrey, for *Shawlands Choice* Gift 9th.
H. C.—2862, 2868. C.—2860, 2865.

Class 333.—Middle White Sows, born in 1927, on or after July 1.

- 2880 I. (210).—S. BIDE & SONS, LTD., Pedigree Pig Farm, Farnham, Surrey, for *Compton Lady Jane* (884), born July 8; s. Compton Choice Lad 2nd 63109, d. Compton Lady 7th 150756 by Wharnciffe Master 46847.
- 2883 II. (25).—CHIVERS & SONS, LTD., Histon, Cambridge, for *Histon Welcome* 56th (1075), born July 28; s. Wrattling Woodman 35957, d. Histon Welcome 35th 137668 by Histon Wanderer 25349.
- 2879 III. (23).—MISS ROSALIE B. BABCOCK, Shawlands, Lingfield, Surrey, for *Shawlands Nightingale* (858), born July 15; s. Whitehill Hasty 3rd 59743, d. Mistley Nightingale 98rd by Hawthorn Sultan 6th 45657.
- 2885 IV. (22).—MISS ENID GURNER, Cheterecourt, Edenbridge, for *Salts Choice* 26th (748), born July 2, bred by A. Leney, Little Haven, Hythe, Southampton; s. Wharnciffe Prince 32628, d. Oxney Choice 5th 121344 by Oxney Revel 35505.
- 2896 V. (21).—MRS. SOFER WHITEBURN, Amport St. Mary, Andover, for *Amport Choice* 22nd (0732), born Aug. 25; s. Amport Scotty 11th 62899, d. Amport Choice 5th 162228 by Histon Milpond 35161.
- 2895 R. N.—MRS. HAYES SADLER, Horne Court, Horne, Horley, Surrey, for *Norsbury Welcome* 38nd.
H. C.—2893. C.—2880.

Class 334.—Middle White Sows, born in 1928.

- 2911 I. (210).—MAJOR J. A. MORRISON, D.S.O., Pendley Stock Farms, Tring, for *Pendley Princess* 4th (141), born Jan. 8; s. Salts Prince 7th, d. Whitehill Hagar 5th 143958 by Pendley Warrior 46899.
- 2912 II. (25).—MAJOR J. A. MORRISON, D.S.O., for *Pendley Princess* 5th (143), born Jan. 3; s. Salts Prince 7th, d. Whitehill Hagar 5th 143958 by Pendley Warrior 46899.
- 2917 III. (23).—LEOPOLD C. PAGET, Middlethorpe Hall, York, for *Wharfedale Finoa* (1553), born Jan. 3; s. Wharfedale Apex 59693, d. Wharfedale Silver Queen 148658 by Councilor of Wharfedale 46505.
- 2918 IV. (22).—MRS. SOFER WHITEBURN, Amport St. Mary, Andover, for *Amport Holly* (0880), born Jan. 18; s. Brookenote Prince 15th 43475, d. Godmersham Holly 15th 151598 by Apollo of Wharfedale 43183.

¹ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Middle White Sow.

² Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Middle White Pig.

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- 2905 V. (21).—S. BIDE & SONS, LTD., Pedigree Pig Farm, Farnham, Surrey, for Compton Athara 9th (992), born Jan. 8; s. Compton Choice Lad 2nd 63109, d. Compton Athara 4th 150766 by Wharncliffe Master 46847.
- 2904 R. N.—MISS ROSALIE B. BABCOCK, Shawlands, Lingfield, Surrey, for Shawlands Dorothy 7th.
- H. C.—2903. C.—2921.
- 2789, 2806, 2822, 2911 Special 210.¹—MAJOR J. A. MORRISON, D.S.O., for Pendley Apache, Pendley Hooker, Pendley Prince 5th, and Pendley Princess 4th.
- 2782, 2801, 2858, 2883 Special 25.¹—CHIVERS & SONS, LTD., for Histon Herald 7th, Histon Apollo 8th, Histon Woodlands 6th, and Histon Welcome 55th.
- 2796, 2854, 2878, 2904 R. N. for Specials, MISS ROSALIE B. BABCOCK, for Shawlands Knight 4th, Shawlands Choice Gift 9th, Shawlands Choice Gift 12th, and Shawlands Dorothy 7th.

Tamworths.

Class 335.—Tamworth Boars, born in or before 1926.

- 2922 I. (210, Champion,² & R. N. for Champion.³)—E. R. DEBENHAM, Bladen Estate, Briantspuddle, Dorchester, for Berkswell Bass 55547 (70), born Feb. 21, 1925, bred by Major C. J. H. Wheatley, Berkswell Hall, Coventry; s. Knowle Brooklyn 47121, d. Berkswell Judy 144712 by Toby of Broomshields 47191.
- 2923 II. (25).—CAPT. W. W. HAYES, Harcourt, Stanton, Shrewsbury, for Booley Butcher 59857 (29), born Feb. 26, 1926; s. Booley Aurora 55557, d. Basildon Prudence 156708 by Milton Bishop 2nd 38041.

Class 336.—Tamworth Boars, born in 1927,⁴

- 2926 I. (210, & R. N. for Champion.²)—ROWLAND P. HAYNES, Delves Green Farm, Wednesbury, Staffs, for Whittingham Majesty (30), born March 18, bred by Whittingham Asylum Farm Committee, Preston; s. Eatonbishop Majesty 55559, d. Whittingham Sculptress 3rd 187336 by Red Chief of Caldmore 51975.
- 2929 II. (25).—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for Basildon Tommy Kirnam 10th 64139 (476), born April 13, bred by Major J. A. Morrison, D.S.O., Basildon Park, Reading; s. Knowle Brutus 2nd 47127, d. Basildon Mirror 88022 by Whitacre Firaway 25821.
- 2927 III. (23).—MRS. INGE, Thorpe, Tamworth, for Basildon Nomen 64133 (447), born March 2, bred by Major J. A. Morrison, D.S.O., Basildon Park, Reading; s. Milton Bishop 2nd 38041, d. Knowle Miss June 167262 by Knowle Nomen 47145.
- 2928 R. N.—THE REV. LAKE S. NOBLE, M.A., The Rectory, Hamstall Ridware, Rugeley, for Hamstall Ridware.
- H. C.—2930. C.—2925.

Class 337.—Tamworth Boars, born in 1928.

- 2933 I. (210).—GABRIEL F. FENWICK, The Verzons, Ledbury, for Verzons Carol (36), born Jan. 15; s. Peartown Brown Cle 55587, d. Verzons Caroline 178340 by Whitehouse Cardinal 59883.
- 2934 II. (25).—GABRIEL F. FENWICK, for Verzons Michael (30), born Jan. 15; s. Peartown Brown Cle 55587, d. Verzons Miriam 178344 by Whitehouse Cardinal 59883.
- 2938 III. (23).—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for Berkswell Colorado (94), born Jan. 10; s. Verzons Red Gauntlet 59881, d. Berkswell Constance 167214 by Knowle Councillor 59881.
- 2936 IV. (22).—THE REV. LAKE S. NOBLE, M.A., The Rectory, Hamstall Ridware, Rugeley, for Hamstall Joker (8), born Jan. 2; s. Roxley Peter 5th 55607, d. Shepperton Daisy 178324 by Whitacre Wanderer 39865.
- 2940 R. N.—MAJOR C. J. H. WHEATLEY, for Berkswell Red Pepper.
- H. C.—2935.

Class 338.—Tamworth Breeding Sows, born in or before 1926.

- 2946 I. (210, & R. N. for Champion.²)—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for Berkswell Beauty 167210 (165), born Feb. 8, 1926, farrowed Jan. 20, 1928; s. Milton Beau 55573, d. Berkswell Jezebel 144700 by Knowle Newcastle 47143.
- 2941 II. (25).—E. R. DEBENHAM, Bladen Estate, Briantspuddle, Dorchester, for Red Queen of Oxney 144798 (622), born Jan. 1, 1924, farrowed Feb. 17, 1928, bred by the late Robert Ibbotson, The Hawthorns, Knowle, Birmingham; s. Knowle Nomen 47145, d. Knowle Red Queen 4th 102102 by Knowle Bruce 38013.

¹ Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the National Pig Breeders' Association, for the best groups of four Pigs, bred by Exhibitor, in Classes 328, 329, 330, 332, 333, and 334. One Boar (at least) must be included in each group, and not more than one entry to be selected from any one Class.

² Champion Gold Medal, given by the National Pig Breeders' Association, for the best Tamworth Boar.

³ Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Tamworth Pig.

⁴ Prizes given by the National Pig Breeders' Association.

⁵ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Tamworth Sow.

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2943 III. (23).—THE REV. LAKE S. NOBLE, M.A., The Rectory, Hamstall Ridware, Rugeley, for Shepperton Daisy 178324 (48), born Oct. 21, 1925, farrowed Jan. 2, 1928, bred by Lewis J. Hobley, Chilvers Coton, Nuneaton; s. Whitacre Wanderer 39865, d. Shepperton Queen 2nd 155876 by Putley Rocket 32757.

2945 R. N.—THEO. A. STEPHENS, Frensham Manor, Farnham, Surrey, for Hookstile Pandora 3rd.
H. C.—2944.

Class 339.—*Tamworth Sows, born in 1927.*

2952 I. (210, Champion,¹ & Champion.²)—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for Berkswell Red Cap 178200 (31), born Jan. 6; s. Verzons Red Gauntlet 59881, d. Berkswell Constance 167214 by Knowle Councillor 59861.

2947 II. (25).—E. R. DEBENHAM, Bladen Estate, Briantspuddle, Dorchester, for Bladen Queen (33), born June 8; s. Basildon Red Prince 5th 59825, d. Oxney Red Queen 3rd 178208 by Algarsthorpe Red Breast 55479.

2951 III. (23).—MAJOR C. J. H. WHEATLEY, for Basildon Favourite 2nd 178150 (480), born Jan. 4, bred by Major J. A. Morrison, D.S.O., Basildon Park, Reading; s. Knowle Duke 2nd 55567, d. Favor of Basildon 144730 by Knowle Newcastle 47143.

2949 R. N.—THE REV. LAKE S. NOBLE, M.A., The Rectory, Hamstall Ridware, Rugeley, for Hamstall Poppy 4th.
H. C.—2948. C.—2950.

Class 340.—*Tamworth Sows, born in 1928.*

2956 I. (210).—GABRIEL F. FENWICK, The Verzons, Ledbury, for Verzons Rebecca (35), born Jan. 6; s. Peartown Brown Cloe 55587, d. Verzons Ruth 178346 by Whitehouse Cardinal.

2960 II. (25).—THE REV. LAKE S. NOBLE, M.A., The Rectory, Hamstall Ridware, Rugeley, for Hamstall Daisy (11), born Jan. 2; s. Roxley Peter 5th 55607, d. Shepperton Daisy 178234 by Whitacre Wanderer 39865.

2958 III. (23).—ROWLAND P. HAYNES, Delves Green Farm, Wednesbury, Staffs, for Rushall Sally 3rd (131), born Jan. 2, bred by B. C. Anson, Daw End Farm, Rushall, Walsall; s. Darfield Joe 59859, d. Sunbeam Sally 2nd by Sunbeam Squire 2nd 55609.

2955 IV. (22).—GABRIEL F. FENWICK, for Verzons Rachael (34), born Jan. 6; s. Peartown Brown Cloe 55587, d. Verzons Ruth 178346 by Whitehouse Cardinal.

2964 V. (21).—MAJOR C. J. H. WHEATLEY, Berkswell Hall, Coventry, for Berkswell Constance 7th (96), born Jan. 10; s. Verzons Red Gauntlet 59881, d. Berkswell Constance 167214 by Knowle Councillor 59861.

2959 R. N.—MRS. INGE, Thorpe, Tamworth, for Inge Viola.
H. C.—2957. C.—2954.

Berkshires.

Class 341.—*Berkshire Boars, born in or before 1926.*

2967 I. (210, Champion,³ Champion,⁴ & R. N. for Champion.⁵)—J. D. PLAYER, Lenton Hurst, Lenton, Nottingham, for Leadenham Duke B 748, born Jan. 15, 1923, bred by Capt. J. S. Reeve, Leadenham House, Lincoln; s. Pamber Paragon 23411, d. Leadenham Turvey 5th 25938 by Manor Robert 22770.

2970 II. (25).—LT.-COL. H. G. THOMSON, D.S.O., Hill House, Berkswell, Coventry, for Lagents Jupiter B 2109, born Sept. 2, 1926; s. Ascots Bellman B 1051, d. Leadenham Topsy 4th 25935 by Manor Robert 22770.

2971 III. (22).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Royal Pygmalion 3rd B 852, born Sept. 8, 1923; s. Pygmalion 10872, d. Highfield Princess Royal 4th B 1405 by Pamber President 22702.

2968 R. N.—J. T. EASON, Woodhouse Farm, Andover, for Marksman.
H. C.—2965.

Class 342.—*Berkshire Boars, born in 1927, before July 1.*

2976 I. (210, R. N. for Champion,⁶ & R. N. for Champion.⁶)—JULIUS FRICKM, JUN., Bridge Close Farm, Hardington, Yeovil, for Bridge Keystone B 1961, born March 24; s. Iwerne Exchequer B 784, d. Bungays Forty S 2884 by Heale War Lunn 24172.

2978 II. (25).—READING CORPORATION, The Manor Farm, Whitley, Reading, for Whitley Charles 5th, born Feb. 28; s. Whitley Charles B 1356, d. Whitley Elver's Primrose S 6647 by Woodhouse Success B 440.

¹ Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Tamworth Pig.

² Champion Gold Medal, given by the National Pig Breeders' Association, for the best Tamworth Sow.

³ Champion Gold Medal, given by the National Pig Breeders' Association, for the best Berkshire Boar.

⁴ Silver Challenge Cup, given by the National Pig Breeders' Association, for the best Berkshire Boar.

⁵ The "Eaton" Silver Challenge Cup, given through the National Pig Breeders' Association, for the best Berkshire Pig.

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- 2981 III. (23).—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for Suddon Gift, born May 3, bred by Julius Fricker, Manor Farm, Stalbridge, Dorset; s. Basildon Eminent B 1794, d. Suddon Susan 2971 by Heale War Lunn 24172.
 2977 IV. (22).—THE EARL OF HAREWOOD, Harewood House, Leeds, for Rudgate Emperor 2nd B 2217, born Jan. 19, bred by C. Triffitt, Tookwith, York; s. Highfield Royal President B 338, d. Rudgate Pygmalion Queen 4th 4744 by Rudgate Pygmalion B 901.
 2979 R. N.—CAPT. JOHN SHERRARD REEVE, Leadenham House, Lincoln, for Leadenham Independent.
 C.—2975, 2980.

Class 343.—Berkshire Boars, born in 1927, on or after July 1.¹

- 2986 I. (210).—J. T. EASON, Woodhouse Farm, Andover, for Woodhouse Amanullah 2nd, born Oct. 7; s. Marksman B 1821, d. Ashe Bountiful S 7088 by Heale Nutmeg 2nd 26448.
 2990 II. (25).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Royal Pygmalion 15th B 2081, born July 2; s. Highfield Royal Pygmalion 3rd B 852, d. Highfield Princess Royal 24th S 5298 by Highfield Marina Baronet 3rd B 1109.
 2989 III. (23).—SLADE & MERTON, Willards Hill, Etchingham, Sussex, for Dovers Peter, born Aug. 7, bred by A. Poupart, Dovers, Rainham, Essex; s. Swinton Peter 2nd B 1699, d. Hammonds Petunia S 6762 by Hammonds Bonny Lad B 480.
 2985 IV. (22).—J. T. EASON, for Woodhouse Amanullah, born Oct. 7; s. Marksman B 1821, d. Ashe Bountiful S 7088 by Heale Nutmeg 2nd 26448.
 2982 R. N.—JOSHUA BALL, Southworth Hall, Warrington, for Southworth Roseway.
 H. C.—2984. C.—2987.

Class 344.—Berkshire Boars, born in 1928.

- 2997 I. (210).—J. T. EASON, Woodhouse Farm, Andover, for Woodhouse Primus, born Jan. 2; s. Marksman B 1821, d. Woodhouse Miss Prim 5th S 2099 by Stonelenge Druid B 1560.
 3000 II. (25).—JULIUS FRICKER, JUN., Bridge Close Farm, Hardington, Yeovil, for Bridge Walloon, born Jan. 14; s. Canford Nutmeg 2nd B 1858, d. Bridge Daphne S 7418 by Iwerne Exchequer B 784.
 3006 III. (23).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Royal President 25th, born Jan. 7; s. Highfield Royal President 2nd B 339, d. Highfield Princess Royal 8th S 3319 by Pygmalion 19872.
 3002 IV. (22).—THOMAS EDWARD PREST, Chapel Farm, Swinton, Malton, for Chapel Carrier, born Jan. 1; s. Hammonds Carrier B 1022, d. Swinton Live Margaret S 6444 by Murrell Live Scott B 37.
 3001 V. (21).—MAJOR J. A. MORRISON, D.S.O., Basildon Park, Reading, for Basildon Royal Pygmalion, born Jan. 5; s. Highfield Roy Pygmalion 8th B 1878, d. Highfield Princess Royal 41st S 7184 by Highfield Royal President 2nd B 339.
 2998 R. N.—SIR HUGO M. FITZHERBERT, BART., Kingstone Lisle, Wantage, for Tissington Charlie.
 H. C.—2993. C.—2999.

Class 345.—Berkshire Breeding Sows, born in or before 1926.

- 3021 I. (210, Champion.* & Champion.†)—READING CORPORATION, The Manor Farm, Whitley, Reading, for Whitley Ella's Beauty S 5593, born Sept. 8, 1924, farrowed Jan. 12, 1928; s. Murrell Binky 21236, d. Whitley Elleborin S 4414 by Ramsholt Abel 23554.
 3018 II. (25).—HILLSBOROUGH FRUIT FARM, Canford, Wimborne, for Woodhouse Select, S 5503, born Feb. 14, 1925, farrowed Feb. 8, 1928, bred by J. E. Eason, Woodhouse Farm, Andover; s. Woodhouse Boniface B 1013, d. Mount Select S 2098 by Heale Nutmeg 26448.
 3014 III. (23).—GEOFFREY R. CLOSE, Geeston, Ketton, Stamford, for Geeston Peggy S 5329, born March 7, 1925, farrowed April 24, 1928; s. Otterburndene President B 1110, d. Buckland Dulcimer PS 2879 by Lord Kirkham 19989.
 3025 IV. (22).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Princess Royal 7th S 3318, born Sept. 8, 1923, farrowed Feb. 2, 1928; s. Pygmalion 10872, d. Highfield Princess Royal 4th S 1405 by Famber President 22702.
 3026 V. (21).—CHARLES TRIFFITT, Ferncliffe House, Tookwith, Yorks, for Fulford Princess Royal S 5770, born Sept. 11, 1925, farrowed Feb. 17, 1928, bred by J. E. Triffitt, 1A, St. Oswald's Road, Fulford, York; s. Highfield Royal President 2nd B 339, d. Highfield Princess Royal 19th S 5124 by Highfield Marina President 22702.
 3020 R. N.—READING CORPORATION, for Suddon Marquits.
 H. C.—3009. C.—3008.

Class 346.—Berkshire Sows, born in 1927, before July 1.

- 3040 I. (210, & R. N. for Champion.†)—J. T. EASON, Woodhouse Farm, Andover, for Woodhouse Reputation, born April 4; s. Heale Nutmeg 2nd 26448, d. Bridge Beauty Spot S 4664 by Magna Prince B 404.

¹ Prizes, except Fourth, given by the National Pig Breeders' Association.

* The "Eaton" Silver Challenge Cup, given through the National Pig Breeders' Association, for the best Berkshire Pig.

† Champion Gold Medal, given by the National Pig Breeders' Association, for the best Berkshire Sow.

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- 3045 II. (25).—JULIUS FRICKER, JUN., Bridge Close Farm, Hardington, Yeovil, for Bridge Patience S 7432, born Jan. 10; s. Iwerne Exchequer B 784, d. Prudence of Harris S 2529 by Whitley Colonel 24751.
- 3058 III. (23).—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for Suddon Princess 8th, born May 4, bred by Julius Fricker, Manor Farm, Stalbridge, Dorset; s. Basildon Eminent B 1794, d. Suddon Fox S 2970 by Heale War Lunn 24172.
- 3041 IV. (22).—J. T. EASON, for Woodhouse Reputation 2nd, born April 4; s. Heale Nutmeg 2nd 26448, d. Bridge Beauty Spot S 4664 by Magna Prince R 404.
- 3037 V. (21).—CANFORD SCHOOLS, Canford, Wimborne, for Stalbridge Happy Girl, born March 14, bred by Lord Stalbridge, Stalbridge Park, Dorset; s. Manor Umpire B 1680, d. Motecombe Happy Girl 19th S, 7017 by Manor Pygmalion B 1283.
- 3053 R. N.—LT.-COL. H. G. THOMSON, D.S.O., Hill House, Berkswell, Coventry, for Lagenia Victoria Margaret.
H. C.—3032. C.—3033, 3038, 3043, 3046, 3057.

Class 347.—Berkshire Sows, born in 1927, on or after July 1.

- 3070 I. (210).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Princess Royal 57th S 7936, born July 2; s. Highfield Royal Pygmalion 3rd B 852, d. Highfield Princess Royal 24th S 5296 by Highfield Marina Baronet 3rd B 1109.
- 3061 II. (25).—JOSHUA BALL, Southworth Hall, Warrington, for Southworth Primula 9th, born Aug. 7; s. Heale Nutmeg 2nd 26448, d. Southworth Primula 3rd by Swinton Printer B 1309.
- 3067 III. (23).—J. T. EASON, Woodhouse Farm, Andover, for Woodhouse Prolific, born Oct. 7; s. Marksman B 1821, d. Ashe Bountiful S 7088 by Heale Nutmeg 2nd 26448.
- 3068 IV. (22).—JULIUS FRICKER, JUN., Bridge Close Farm, Hardington, Yeovil, for Bungays Vida, born Aug. 10, bred by M. J. Day, Bungays Farm, Stalbridge, Dorset; s. Bungays Select B 1915, d. Bungays Pride S 4666 by Bungays Sharper B 251.
- 3066 V. (21).—GEOFFREY R. CLOSE, Geeston, Ketton, Stamford, for Geeston Cherub, born July 6; s. Geeston Toreador B 1457, d. Geeston Pride 2nd 7794 by Richings Beauty Royalist 6th B 1454.
- 3071 R. N.—HON. MRS. BRUCE WARD, Godinton, Ashford, Kent, for Godinton Nigeria 25th.
H. C.—3069. C.—3063, 3064.

Class 348.—Berkshire Sows, born in 1928.

- 3085 I. (210).—FRANK TOWNEND, Highfield, Moor-Allerton, Leeds, for Highfield Princess Royal 60th, born Jan. 7; s. Highfield Royal President 2nd B 339, d. Highfield Princess Royal 8th S 3319 by Pygmalion 19872.
- 3079 II. (25).—MAJOR J. A. MORRISON, D.S.O., Basildon Park, Reading, for Basildon Bridget, born Jan. 7; s. Highfield Royal President 2nd B 339, d. Harewood Bridget S 1258 by Herriard Clondyke 23100.
- 3080 III. (23).—MAJOR J. A. MORRISON, D.S.O., for Basildon Princess Royal, born Jan. 5; s. Highfield Roy Pygmalion 8th B 1678, d. Highfield Princess Royal 41st S 1784 by Highfield Royal President 2nd B 339.
- 3081 IV. (22).—THOMAS EDWARD PREST, Chapel Farm, Swinton, Malton, for Chapel Margaret, born Jan. 1; s. Hammonds Carrier B 1022, d. Swinton Live Margaret S 6444 by Murrell Live Scott B 37.
- 3086 V. (21).—THE HON. MRS. BRUCE WARD, Godinton, Ashford, Kent, for Godinton Flunkette 6th, born Jan. 31; s. Highfield Roy President 8th B 1685, d. Promise S 6265 by Pamber President 22782.
- 3074 R. N.—R. CLIFTON-BROWN, Burnham Grove, Burnham, Bucks, for Burnham Kroyah 1st.
H. C.—3075. C.—3076, 3078, 3084.

Cup.—J. T. EASON.

R. N. for Cup.—FRANK TOWNEND.

- 2986, 2987, 3040, 3067 Special 210.—J. T. EASON, for Woodhouse Amanniah, Woodhouse Primus, Woodhouse Reputation, and Woodhouse Prolific.
- 2976, 3000, 3048, 3078 Special 25.—JULIUS FRICKER, JUN., for Bridge Keystone, Bridge Walloon, Bridge Patience and Bridge Daphne 2nd.
- 2990, 3006, 3070, 3085 R. N. for Specials.—FRANK TOWNEND, for Highfield Royal Pygmalion 15th, Highfield Royal President 25th, Highfield Princess Royal 57th, and Highfield Princess Royal 60th.

Large Blacks.

Class 349.—Large Black Boars, born in or before 1926.

- 3092 I. (210, & Champion).—D. W. P. GOUGH, Pakenham Manor, Bury St. Edmunds, for Valley Quality C 178, born Jan. 10, 1926, bred by J. C. Oliver, Woodland Valley, Ladock, Cornwall; s. Valley Discreet A 1397, d. Valley Victory 6th 123572 by Valley Grenadier 2nd 29115.

¹ The "Berkshire" Silver Challenge Cup, given through the National Pig Breeders' Association, for the most points awarded in a combination of entries.

² Special Prizes of £10 (First Prize) and £5 (Second Prize), given by the National Pig Breeders' Association for the best groups of four pigs, bred by Exhibitor, in Classes 342, 343, 344, 346, 347, and 348. One Boar (at least) must be included in each group, and not more than one entry to be selected from any one Class.

³ Silver Challenge Cup, given by the Large Black Pig Society, for the best Boar. A Gold Medal was given to the Breeder of the Champion Boar.

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- 3095 II. (25).—WALTER J. WARREN, Deacons Farm, Staplegrove, Taunton, for Kibbear Royal Willie 25777, born Sept. 9, 1922; s. Vahan Jack 5th 13845, d. Kibbear Lady Hilda 1st 58232 by Bassingbourn Squire 9053.
3093 III. (23).—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Kedington Monogram B 759, born July 6, 1925; s. Kedington Triumph 26673, d. West Wrattling Mona 102660 by Streetly Marvel 12603.
3094 IV. (22).—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, for Trewithen Bounder C 853, born July 3, 1926, bred by William Truscott, Trewithen, Sticker, St. Austell; s. Cargoll 12th A 143, d. Trewithen Queen 1st 4884 by Treluckey Traveller 1st 30685.
3087 V. (21).—HARRY E. EASTARD, Tinten Manor, St. Tudy, Cornwall, for Tinten Leader C 849, born May 4, 1926; s. Cornwood Daunt B 21, d. Tinten Black Bess 51st B 270 by Cornwood J.P. 2nd 28949.
3091 R. N.—F. W. GILBERT, The Manor, Chellaston, Derby, for Westpetherwin Sunstar.

Class 350.—*Large Black Boars, born in 1927, before July 1.*

- 3102 I. (210. & R. N. for Champion.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for Hendra Sunstar D 5, born Jan. 2, bred by N. Stephens, Glenmorris, St. Mabyn, Cornwall; s. Westpetherwin Sunstar B 473, d. Hendra Susie 11th C 1500 by St. Teath What's Wanted 1st 19223.
3103 II. (25).—JOHN C. OLVER, Woodland Valley, Ladock, Cornwall, for Valley Satisfaction 2nd D 673, born June 1; s. Valley Satisfaction B 593, d. Beauty of the Valley 65th C 606 by Valley Sportsman 23735.
3104 III. (23).—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Kedington Fater D 383, born Jan. 15; s. Newland Selim C 31, d. Kedington Model B 2534 by Kedington Triumph 26673.
3101 R. N.—THE EARL OF DARTMOUTH, K.C.B., Patshull Home Farm, Wolverhampton, for Patshull Heroic.

Class 351.—*Large Black Boars, born in 1927, on or after July 1.**

- 3112 I. (210).—W. W. WOOLLAND, Baydon Manor, Ramsbury, Wilts, for Baydon Highlander 1st D 507, born July 28; s. Charlwood Senior 1st B 933, d. Baydon Nightingale 22nd C 3098 by Valley General 2nd 25401.
3107 II. (25).—F. W. GILBERT, The Manor, Chellaston, Derby, for Chellaston Chief D 675, born July 11; s. Docking Rajah B 821, d. Grendon Quicklime 1st 84526 by Tinten Chief 12969.
3111 III. (23).—WALTER J. WARREN, Deacons Farm, Staplegrove, Taunton, for Kibbear Royal Henry 1st D 679, born Aug. 27; s. Tinten Doleful Dick C 1031, d. Kibbear Royal Lady 12th C 220 by Kibbear Royal Willie 25777.
3109 R. N.—SIR ALGERNON PEYTON, BART., Swifts House, Bicester, Oxon, for Swifts Laurence.
H. C.—3110. C.—3106.

Class 352.—*Large Black Boars, born in 1928.*

- 3121 I. (210).—JOHN C. GLOVER, Cornwood, Devon, for Cornwood Lone Star E 39, born Feb. 1; s. Kibbear Royalist 8th D 89, d. Cornwood Lass 89th C 3016 by Marham Marvel 22078.
3123 II. (25).—R. GYNN & SON, Treslay, Camelford, Cornwall, for Treslay Blue Blood 3th E 87, born Jan. 3; s. Tinten Leader C 849, d. Westpetherwin Sunbeam A 170 by Trevisquite Joseph 20911.
3131 III. (23).—JOHN C. OLVER, Woodland Valley, Ladock, Cornwall, for Trewithen Satisfaction E 61, born Jan. 5, bred by William Truscott, Trewithen, Sticker, St. Austell; s. Valley Satisfaction B 593, d. Trewithen Queen 2nd A 4886 by Treluckey Traveller 1st 30685.
3113 IV. (22).—WILFRID J. ACREMAN, Langland Farm, Carcott, Bridgwater, for Langland Nigger E 13, born Jan. 5; s. Langland Sambo C 847, d. Luson Princess 4th 104432 by Westpetherwin Chief 1st 14433.
3128 V. (21).—MISS KAY-MOUAT, Firs Farm, Malvern Wells, for McHeather Sultan 5th E 71, born Jan. 3; s. Drayton Raven C 139, d. McHeather Susan 19th A 5058 by Cornwood Sunstar 30951.
3134 R. N.—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, for Treveglas Dandy 2nd.
H. C.—3126. C.—3115.

Class 353.—*Large Black Breeding Sows, born in or before 1926.*

- 3141 I. (210. & Champion.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for Westpetherwin Sunbeam A 170, born Jan. 22, 1924, farrowed Jan. 3, 1928, bred by J. E. Heard, Launceston, Cornwall; s. Trevisquite Joseph 20911, d. Westpetherwin Lady 2nd A 74280 by Valley Royal Victor 7563.

* Silver Challenge Cup, given by the Large Black Pig Society, for the best Boar. A Gold Medal was given to the Breeder of the Champion Boar.

* Prizes given by the Large Black Pig Society.

* Silver Challenge Cup, given by the Large Black Pig Society, for the best Sow. A Gold Medal was given to the Breeder of the Champion Sow.

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- 3139 II. (25.)—THE EARL OF DARTMOUTH, K.C.B., Patshull Home Farm, Wolverhampton, for Patshull Lassie 1st B 786, born June 5, 1925, farrowed Feb. 6, 1928; s. Maxwelltown Prince Charlie 15679, d. Maxwelltown Lassie 63rd A 100792 by Cornwood Marvel 4th 21835.
- 3143 III. (23.)—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Kedington Constance 2nd 128718, born July 21, 1923, farrowed Feb. 11, 1928; s. Ashby Lex 24747, d. Gage Opaque 2nd 99280 by Streetly Orpheus 17891.
- 3145 IV. (22.)—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, for Tinten Black Bess 48th A 3480, born June 12, 1924, farrowed Jan. 6, 1928, bred by H. E. Bastard, Tinten Manor, St. Tudy; s. Cornwood J.P. 2nd 28949, d. Tinten Black Bess 34th 38340 by Cornwood King John 8271.
- 3146 V. (21.)—WALTER J. WARREN, Deacons Farm, Staplegrove, Taunton, for Pednor Lass 5th B 292, born Jan. 14, 1925, farrowed Jan. 9, 1928, bred by E. W. Edwards, Pednor House, Chesham; s. Pednor Royal 2nd 29389, d. Treveglas Lass 20th A 44732 by Vahan Melva 2nd 5691.
- 3147 R. N.—WILBECK ESTATES CO., LTD., Mansfield Woodhouse, Notts, for Holbeck Beauty 2nd.
H. C.—3149. C.—3140.

Class 354.—Large Black Sows, born in 1927, before July 1.

- 3154 I. (210. & R. N. for Champion.)—THE EARL OF DARTMOUTH, K.C.B., Patshull Home Farm, Wolverhampton, for Patshull Susan 1st D 588, born Jan. 1; s. Patshull Prince 1st B 405, d. Grendon Susan 6th A 284 by Kialton Hero 13241.
- 3156 II. (25.)—D. W. P. GOUGH, Pakenham Manor, Bury St. Edmunds, for Fowlmere Dauntless 1st D 1470, born Jan. 6, bred by W. Jackson, Fowlmere, Cambs; s. Bassingbourn Royal 2nd B 641, d. Fowlmere Dauntless 121246 by Fowlmere Prior 20675.
- 3161 III. (23.)—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, for Treveglas Clematis D 2664, born May 20, bred by John Warne, Tregonhayne Manor; s. Valley Midnight B 943, d. Valley Clematis 16th A 5783 by Valley Sportsman 237353.
- 3157 IV. (22.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for Hendra Susie 15th D 18, born Jan. 2, bred by N. Stephens, St. Mabyn, Cornwall; s. Westpetherwin Sunstar B 478, d. Hendra Susie 11th C 1500 by St. Teath What's Wanted 1st 19223.
- 3159 V. (21.)—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Kedington Model 2nd D 1426, born Jan. 15; s. Newland Selim C 31, d. Kedington Model B 2584 by Kedington Triumph 26678.
- 3162 R. N.—H. E. BENNETT, Holt Castle Farm, Worcester, for Ambo Dido 8th.
H. C.—3156. C.—3155.

Class 355.—Large Black Sows, born in 1927, on or after July 1.

- 3160 I. (210.)—JOHN H. GLOVER, Cornwood, Devon, for Minfield Lass D 1190, born July 1, bred by Major H. C. Few, Drayton Lodge, Ninsfield, Battle, Sussex; s. Docking Spiteful C 1096, d. Ninsfield Lovebird 1st C 862 by Drayton Donzelon A 1803.
- 3170 II. (25.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for Treslay Belle 12th D 1332, born July 20; s. Treslay Boy B 11, d. Westpetherwin Sunbeam A 170 by Trevisquite Joseph 20911.
- 3176 III. (23.)—FRANK SAINSBURY, Blunts Hall, Little Wrattling, Haverhill, for Kedington Constance 18th D 2464, born Aug. 1; s. Kedington Brigid C 563, d. Kedington Constance 2nd 128718 by Ashby Lex 24747.
- 3167 IV. (22.)—F. W. GILBERT, The Manor, Chellaston, Derby, for Chellaston Lucky Queen 1st D 2688, born July 81; s. Docking Rajah B 821, d. Drayton Lynxeye 1st A 5180 by Drayton's Royal Son 4th 27583.
- 3177 V. (21.)—FRANK SAINSBURY, for Kedington Constance 15th D 2470, born Aug. 1; s. Kedington Brigid C 563, d. Kedington Constance 2nd 128718 by Ashby Lex 24747.
- 3164 R. N.—WILFRID J. ACREMAN, Langland Farm, Catcott, Bridgwater, for Langland Duchess 1st.
H. C.—3166. C.—3171.

Class 356.—Large Black Sows, born in 1928.

- 3165 I. (210.)—JOHN WARNE & SON, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, for Banns Pearl 1st B 46, born Jan. 3, bred by W. Hoskin, Boscaren, Penzance; s. Trowithen Prince 2nd C 275, d. Banns Biddy 2nd C 4332 by Fentongollen Amir 2nd B 429.
- 3186 II. (25.)—JOHN H. GLOVER, Cornwood, Devon, for Cornwood Lass 92nd E 50, born Feb. 1; s. Kibbear Royalist 8th D 89, d. Cornwood Lass 89th C 8016 by Martham Marvel 22073.
- 3188 III. (23.)—R. GYNN & SON, Treslay, Camelford, Cornwall, for Treslay Belle 14th E 156, born Jan. 3; s. Tinten Leader C 849, d. Westpetherwin Sunbeam A 170 by Trevisquite Joseph 20911.
- 3184 IV. (22.)—THE EARL OF DARTMOUTH, K.C.B., Patshull Home Farm, Wolverhampton, for Patshull Bangle 15th E 60, born Jan. 27; s. Patshull Prince 1st B 405, d. Patshull Bangle 2nd B 158 by McLeather Bob 40th 26968.

* Silver Challenge Cup, given by the Large Black Pig Society, for the best Sow. A Gold Medal was given to the Breeder of the Champion Sow.

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- 3181 V. (#1).—HARRY E. BASTARD, Tinten Manor, St. Tudy, Cornwall, for Tinten Heroine 13th E 54, born Jan 12; s. Tinten Leader C 849, d. Tinten Heroine 1st 130098 by Rialton Hero 13241.
 3194 R. N.—JOHN C. OLVER, Woodland Valley, Ladoek, Cornwall, for Meadowside Queen 6th.
 H. C.—3191, 3198. C.—3189.
 3102, 3141, 3170 Gold Vase.¹—R. GYNN & SON, for Hendra Sunstar, Westpetherwin Sunbeam, and Treslay Belle 12th.
 3101, 3139, 3154 R. N. for Gold Vase.¹—THE EARL OF DARTMOUTH, K.C.B., for Patshull Heroic, Patshull Lassie 1st, and Patshull Susan 1st.

Gloucestershire Old Spots.

Class 357.—Gloucestershire Old Spots Boars, born in or before 1926.

- 3199 I. (#10).—H. C. BAKER, Oaklands, Almondsbury, Bristol, for Holmwood Lillywhite 5650, born Feb. 7, 1926, bred by Stanley H. Badock, Holmwood, Westbury-on-Trym; s. Thornbury Buffalo 5542, d. Holmwood Lily the 3rd X 543 by Eastcott Roger 5393.
 3202 II. (#5).—SHERRIFF & SONS, Lemsford, Hatfield, for Hempstead Spot 5619, born Jan. 1, 1926, bred by W. T. and A. G. Bailey, Grist House Farm, Hemel Hempstead; s. Hempstead General 5498, d. Hempstead Daphne 2nd 17854 by Clevehill Jim 4757.
 3201 III. (#3).—BENNETT & HOWARD, Quarry Farm, Thornbury, Glos, for Dumbleton Rambler 5743, born Feb. 11, 1926, bred by the late A. D. Wilcox, Dumbleton, Evesham; s. Lovington Pirate 4497, d. Dumbleton Miss 33rd 17451 by Woodstock Duke 1541.

Class 358.—Gloucestershire Old Spots Boars, born in 1927.²

- 3204 I. (#10, & R. N. for Champion.³)—W. T. and A. G. BAILEY, Grist House Farm, Hemel Hempstead, for Hempstead Jim 9th 5791, born July 3; s. Hempstead General 5498, d. Hempstead Daphne 3rd X 540 by Nashes Major 1st 4945.
 3207 II. (#5).—BENNETT & HOWARD, Quarry Farm, Thornbury, Glos, for Thornbury Bandage 5804, born Aug. 21; s. Dumbleton Rambler 5743, d. Thornbury Banana Z 053 by Maiden Bradley Doctor 5599.
 3203 III. (#3).—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, for Holmwood Doctor 2nd 5778, born May 13; s. Maiden Bradley Doctor 5413, d. Holmwood Cream X 808 by Thornbury Buffalo 5542.
 H. C.—3206, 3208.

Class 359.—Gloucestershire Old Spots Boars, born in 1928.

- 3209 I. (#10, & Champion.³)—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, for Holmwood Lillywhite 2nd 5813, born Jan. 13; s. Maiden Bradley Judge 5598, d. Holmwood Beam X 809 by Thornbury Buffalo 5542.
 3210 II. (#5).—W. T. and A. G. BAILEY, Grist House Farm, Hemel Hempstead, for Hempstead Jim 12th 5808, born Jan. 4; s. Holmwood Wight 5657, d. Hempstead Daphne 13th X 759 by Hempstead General 5498.
 3213 III. (#3).—SHERRIFF & SONS, Lemsford, Hatfield, for Nashes Duke 15th 5803, born Jan. 5; s. Hempstead Spot 5619, d. Nashes Duchess 35th X 801 by Fevensey Bruce 1st 4283.
 H. C.—3211, 3212, 3214.

Class 360.—Gloucestershire Old Spots Breeding Sows, born in or before 1926.

- 3215 I. (#10, Champion.⁴ & Champion.⁵)—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, for Holmwood Beam X 809, born Feb. 7, 1926, farrowed Jan. 13, 1928; s. Thornbury Buffalo 5542, d. Holmwood Lily 3rd X 543 by Eastcott Roger 5393.
 3218 II. (#5).—J. F. WRIGHT, Olton Farm, Solihull, Warwickshire, for Solihull Primrose 2nd X 938, born June 6, 1926, farrowed March 29, 1928; s. Solihull Pierlot 5616, d. Solihull Primrose 1st X 924 by Solihull Major 5353.
 3216 III. (#3).—W. T. and A. G. BAILEY, Grist House Farm, Hemel Hempstead, for Hempstead Daphne 4th X 541, born Jan. 3, 1925, farrowed Jan. 4, 1928; s. Nashes Major 1st 4945, d. Hempstead Daphne 2nd 17854 by Clevehill Jim 4757.

Class 361.—Gloucestershire Old Spots Sows, born in 1927.

- 3219 I. (#10, R. N. for Champion.⁴ & R. N. for Champion.⁵)—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, for Holmwood Lily 10th Z 172, born Jan. 22; s. Maiden Bradley Doctor 5413, d. Holmwood Lily 3rd X 543 by Eastcott Roger 5393.

¹ The "Baydon" Gold Vase, given through the Large Black Pig Society, for the best Group, consisting of one Boar from Classes 349, 350, or 351; one Breeding Sow from Class 358; and one Sow from Classes 353, 354, or 355.

² Prizes given by the Gloucestershire Old Spots Pig Society.

³ Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society, for the best Boar.

⁴ Perpetual Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society, for the best Boar or Sow.

⁵ Perpetual Silver Challenge Cup, given through the Gloucestershire Old Spots Pig Society, or the best Sow.

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- 3225 II. (25).—SHERIFF & SONS, Lemsford, Hatfield, for Nashes Duchess 40th Z 278, born July 3; s. Eastcott Defiance 5607, d. Nashes Duchess 27th X 497 by Nashes Premier 2nd 5423.
- 3220 III. (23).—W. T. and A. G. BAILEY, Grist House Farm, Hemel Hempstead, for Hempstead Daphne 27th Z 241, born July 2; s. Holmwood Wight 5657, d. Hempstead Daphne 13th X 759 by Hempstead General 4598.
- 3226 IV. (22).—J. F. WRIGHT, Olton Farm, Solihull, Warwickshire, for Mitchellroy Lady Z 227, born July 3, bred by F. J. Jones, Mitchellroy, Monmouth; s. Hempstead Jim 1st 5580, d. Mitchellroy Magpie 13426 by Birdlip Boss 1675.
- 3222 R. N.—JAMES D. BEAR, Maiden Bradley, Frome, for Maiden Bradley Best of All. H. C.—3224, 3228.

Class 362.—Gloucestershire Old Spots Sows, born in 1928.

- 3232 I. (210).—BENNETT & HOWARD, Quarry Farm, Thornbury, Glos, for Thornbury Bar-Nine Z 282, born Jan. 4; s. Dumbleton Rambler 5748, d. Thornbury Bar-Two X 228 by Ayot Page 5069.
- 3229 II. (25).—STANLEY H. BADOCK, Holmwood, Westbury-on-Trym, for Holmwood Beam 5th Z 305, born Jan. 13; s. Maiden Bradley Judge 5598, d. Holmwood Beam X 809 by Thornbury Buffalo 5542.
- 3233 III. (23).—SHERIFF & SONS, Lemsford, Hatfield, for Nashes Duchess 42nd Z 280, born Jan. 5; s. Hempstead Spot 5619, d. Nashes Duchess 35th X 801 by Pevensy Bruce 1st 4283.
- 3230 R. N.—W. T. and A. G. BAILEY, Grist House Farm, Hemel Hempstead, for Hempstead Daphne 30th. H. C.—3231, 3234, 3235.

Wessex Saddlebacks.

Class 363.—Wessex Saddleback Boars, born in or before 1926.

- 3238 I. (210, Champion,¹ & R. N. for Champion.²)—THE HON FRANÇOIS DE MOLEYSNS and F. M. S. GROVES, Leasingham, Sleaford, for Slythehurst Bar None 2336, born Jan. 2, 1924, bred by Dr. William H. Forshaw, Slythehurst, Ewhurst, Guildford; s. Norman King Offa 219, d. Slythehurst Bracken 4938 by Ashe Mac 2nd 680.
- 3243 II. (25).—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Dandy 2985, born March 5, 1926; s. Pipers Adrian 2243, d. Offa Doreen 4845 by Offa Edmund 471.
- 3239 III. (23).—DR. WILLIAM H. FORSHAW, Slythehurst, Ewhurst, Guildford, for Slythehurst Chorister 2795, born Oct. 18, 1925; s. Slythehurst Prince Forester 1329, d. Slythehurst Chance 11807 by Kingsland Charlie 1812.
- 3240 IV. (22).—H. H. HARRIS, New Farm, Besford, Worcester, for Offa Hero 1st 1914, born Jan. 1, 1923, bred by Stanley White, Hammonds End, Harpenden; s. Offa Emperor 1170, d. Offa Agatha 5th 2103 by Kingswalden Monument 638.
- 3237 R. N.—W. H. DAVENPORT, Cornmill Farm, Wallingwells, Carlton, Worksop, for Preston Oracle 1st. H. C.—3236, 3241. C.—3245.

Class 364.—Wessex Saddleback Boars, born in 1927.³

- 3252 I. (210, & R. N. for Champion.¹)—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Lord 3088, born Jan. 27; s. Preston Senator 1st 2765, d. Preston Lilac 12705 by Pipers Adrian 2243.
- 3247 II. (25).—DR. WILLIAM H. FORSHAW, Slythehurst, Ewhurst, Guildford, for Carlos of Slythehurst 8024, born Jan. 6, bred by Oswald Ellis, Bramley, Guildford; s. Slythehurst Prince Charlie 2718, d. Shillinglee Heroine 2nd 9078 by Norman of Shillinglee 1286.
- 3251 III. (23).—H. G. LAKIN, Pipers Hill, Leamington, for Pipers Sultan 3128, born May 13; s. Pipers Rajah 2921, d. Pipers Begum 18411 by Coker Sambo 1746.
- 3249 R. N.—MRS. MILDRED GREENWELL, Smokejacks, Ockley, Surrey, for Smokejacks Barber. H. C.—3238.

Class 365.—Wessex Saddleback Boars, born in 1928.

- 3261 I. (210).—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Dene 3142, born Jan. 1; s. Brandon Tomahawk 2nd 2870, d. Preston Dowager 2nd 13732 by Pipers Adrian 2243.
- 3258 II. (25).—H. H. HARRIS, New Farm, Besford, Worcester, for Besford Hero 1st 3168, born Feb. 23; s. Offa Hero 1st 1914, d. Besford Brenda 8th 18914 by Shillinglee Swell 2002.
- 3260 III. (23).—H. G. LAKIN, Pipers Hill, Leamington, for Pipers Barbarian 3147, born Jan. 15; s. Slythehurst Baron 2695, d. Pipers Roalta 10967 by Sheffield Scott 1236.
- 3259 IV. (22).—FRANK HARTOP, Eaton Green, Luton, for Eaton Shephard 3165, born Jan. 1; s. Preston Senator 2nd 2766, d. Eaton Shepherdesse 2nd 14182 by Preston Dan 2893.
- 3257 R. N.—F. W. GILBERT, The Manor, Chellaston, Derby, for Chellaston Topper. H. C.—3254.

¹ Champion Gold Medal, given by the Wessex Saddleback Pig Society, for the best Boar.

² Silver Challenge Cup, given by the Wessex Saddleback Pig Society, for the best Boar or Sow.

³ Prizes given by the Wessex Saddleback Pig Society.

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Class 366.—Wessex Saddleback Breeding Sows, born in or before 1926.

- 3269 I. (£10, Champion.¹ & Champion.²)—A. FREELAND, Tuesley Farm, Godalming, for Godalming Eve 13420, born Jan. 26, 1925, farrowed Jan. 16, 1928; s. Shillinglee Apollo 2001, d. Godalming Eugenie 6468 by Ashe Mac 2nd 680.
- 3267 II. (£5.)—DR. WILLIAM H. FORSHAW, Slythehurst, Ewhurst, Guildford, for Godalming Mollie 7th 12349, born Jan. 19, 1925, farrowed Jan. 26, 1928, bred by A. Freeland, Tuesley Farm, Godalming; s. Shillinglee Apollo 2001, d. Godalming Mollie 5491 by Ashe Mac 2nd 680.
- 3278 III. (£3.)—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Dowager 2nd 13732, born March 5, 1926, farrowed Jan. 1, 1928; s. Pipers Adrian 2243, d. Offa Doreen 4845 by Offa Edmund 471.
- 3276 IV. (£2.)—DOLPHIN SMITH, Mackrey End, Harpenden, for Silver Dawn of Harpenden 14044, born March 9, 1926, farrowed Jan. 24, 1928, bred by Douglas Vickers, Temple Dinsley, Hitchin; s. Oakley Prior 1678, d. Preston Dawn 5th 12190 by Royston Cicero 1530.
- 3272 V. (£1.)—MRS. MILDRED GREENWELL, Smokejacks, Oakley, Surrey, for Smokejacks Belle 13673, born Aug. 3, 1926, farrowed Jan. 12, 1928; s. Slythehurst Bar None 2336, d. Biddy of Slythehurst 12669 by Norman of Shillinglee 1280.
- 3268 R. N.—DR. WILLIAM H. FORSHAW, for Slythehurst Baggage.
H. C.—3279. C.—3264.

Class 367.—Wessex Saddleback Sows, born in 1927.

- 3284 I. (£10.)—A. FREELAND, Tuesley Farm, Godalming, for Godalming Mollie 10th 14532, born Jan. 7; s. Godalming Nero 2792, d. Godalming Mollie 7th 12349 by Shillinglee Apollo 2001.
- 3291 II. (£5.)—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Onyx 2nd 13954, born Jan. 20; s. Oakley Prior 1678, d. Preston Oak 2nd 12203 by Royston Cicero 1530.
- 3282 III. (£3.)—DR. WILLIAM H. FORSHAW, Slythehurst, Ewhurst, Guildford, for Gift of Evergreen 14493, born Feb. 1, bred by E. S. Bristow, Sutton-on-Trent, Newark; s. Slythehurst Chancellor 2794 d. Slythehurst Narcissus 12406 by Slythehurst Forest King 1330.
- 3288 IV. (£2.)—FRANK HARTOP, Eaton Green, Luton, for Preston Delta 14022, born Jan. 7, bred by Douglas Vickers, Temple Dinsley, Hitchin; s. Oakley Prior 1678, d. Preston Dulcie 2nd 11153 by Royston Cicero 1530.
- 3292 V. (£1.)—ALEX. WEATHERHEAD, Redbourn Bury, St. Albans, for Redbourn Babs 14685, born Feb. 25; s. Godalming Norman 2nd 2791, d. Redbourn Bashful 1st 12067 by Offa Horse 1916.
- 3285 R. N.—MRS. MILDRED GREENWELL, Smokejacks, Oakley, Surrey, for Smokejacks Bracken.
H. C.—3283

Class 368.—Wessex Saddleback Sows, born in 1928.

- 3302 I. (£10 & R. N. for Champion.³)—DOLPHIN SMITH, Mackrey End, Harpenden, for Harpenden Silver Dawn 3rd 14675, born Jan. 24; s. Pipers Adrian 2243, d. Silver Dawn of Harpenden 14044 by Oakley Prior 1678.
- 3303 II. (£5.)—DOUGLAS VICKERS, Temple Dinsley, Hitchin, for Preston Dido 1st 14578, born Jan. 1; s. Brandon Tomahawk 2nd 2879, d. Preston Dowager 2nd 18732 by Pipers Adrian 2243.
- 3304 III. (£3.)—DOUGLAS VICKERS, for Preston Luck 14676, born Jan. 14; s. Brandon Tomahawk 2nd 2879, d. Preston Lulu 1st 13060 by Oakley Prior 1678.
- 3299 IV. (£2.)—FRANK HARTOP, Eaton Green, Luton, for Eaton Sunshine 14692, born Jan. 16; s. Eaton Lancer 2928, d. Eaton Sundial 13696 by Oakley Prior 1678.
- 3296 V. (£1.)—F. W. GILBERT, The Manor, Chellaston, Derby, for Chellaston Sally 4th 14657, born Jan. 23; s. Preston Dolphin 1st 2967, d. Chellaston Sally 13689 by Preston Victor 2610.
- 3300 R. N.—H. G. LAKIN, Pipers Hill, Leamington, for Pipers Ringdove.
H. C.—3297. C.—3294, 3295.

Essex.

Class 369.—Essex Boars, born in or before 1926.

- 3307 I. (£10.)—J. REGINALD TINNEY, Rickling, Newport, Essex, for Barling Sultan 1493 (5700), born Jan. 19, 1923, bred by Kemsley & Kemsley, Great Wakering, Essex; s. Chelmer Cornsack 745, d. Barling What's Wanted 4182 by Landwick King George 349.
- 3306 II. (£5.)—WILLIAM ALFRED LYON, Foxton House, Royston, for Crossing Laughter 2949 (39), born Jan. 5, 1926, bred by A. J. Cousins, Crossing Lodge, Braintree; s. Roosting Laughter 2607, d. Crossing Duchess 51st 13760 by Crossing Angus 2nd 1839.

¹ Silver Challenge Cup, given by the Wessex Saddleback Pig Society, for the best Boar or Sow.

² Champion Gold Medal, given by the Wessex Saddleback Pig Society, for the best Sow.

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Class 370.—Essex Boars, born in 1927.

- 3309 I. (#10, & R. N. for Champion.)—A. J. COUSINS, Cressing Lodge, Braintree, for Cressing Jay 5th 3437 (267), born Sept. 25; s. Thorley Jay 2725, d. Cressing Duchess 43rd 12554 by Cressing Prince 1355.
- 3310 II. (#5.)—KEMSLEY & KEMSLEY, Crouchmans Farm, Shoeburyness, for Barling Sea Wave 3435 (289), born May 5; s. Barling Colonel 2793, d. Barling Una 3368 by Chelmer Cornsack 745.
- 3308 III. (#3.)—H. S. ASHTON, Trueloves, Ingatstone, for Roothing Laughter 13th 3209 (162), born Jan. 3, bred by W. Ritchie, Marks Hall, Margaret Roding, Dunmow; s. Tewes Laughter 1953, d. Roothing Betty 13384 by Walden Generosity 993.
- 3313 R. N.—J. REGINALD TINNEY, Rickling, Newport, Essex, for Rickling Sultan 8th. H. C.—3312. C.—3314.

Class 371.—Essex Boars, born in 1928.

- 3316 I. (#10.)—WILLIAM RITCHIE, Marks Hall, Margaret Roding, Dunmow, for Roothing Kaiser 3445 (165), born Feb. 16; s. Peace Kaiser 3233, d. Barling Biddy 15948 by Cressing Duke 7th 2271.
- 3317 II. (#5.)—WILLIAM RITCHIE, for Roothing Kaiser 3rd 3455 (293), born Feb. 16; s. Peace Kaiser 3233, d. Barling Biddy 15948 by Cressing Duke 7th 2271.
- 3315 III. (#3.)—A. J. COUSINS, Cressing Lodge, Braintree, for Cressing Jay 6th 3439 (268), born Jan. 15; s. Thorley Jay 2725, d. Cressing Pickle 7th 15634 by Cressing Angus 2nd 1839.
- 3319 R. N.—R. G. WOODALL, Anne Croft, Bilsby, Alford, Lincs, for Ancroft Jester 2nd.

Class 372.—Essex Breeding Sows, born in or before 1926.

- 3322 I. (#10.)—KEMSLEY & KEMSLEY, Crouchmans Farm, Shoeburyness, for Barling Aster 5576 (4306), born Jan. 21, 1922, farrowed March 21, 1928; s. Chelmer Cornsack 745, d. Barling Poppy 4184 by Lashley Soviet 363.
- 3330 II. (#5.)—J. REGINALD TINNEY, Rickling, Newport, Essex, for Rickling Charlotte 6th 11466 (7376), born Aug. 25, 1923, farrowed Jan. 20, 1928; s. Gosfield Scout 2nd 627, d. Rickling Charlotte 1st 6848 by Hubbards Admiral 45.
- 3321 III. (#3.)—GEORGE BRIGGS, Wirsall, Whitechurch, Salop, for Roothing Alice 16126 (10489), born May 10, 1925, farrowed Jan. 2, 1928, bred by W. Ritchie, Margaret Roding, Dunmow; s. Tewes Laughter 1953, d. Walden Alice 2nd 10812 by Cornard Daniel 1407.
- 3325 IV. (#2.)—T. H. SOCHON, Tanfield Tye, West Hanningfield, Chelmsford, for Barling Ash 16934 (10255), born March 29, 1925, farrowed Feb. 6, 1928, bred by Kemsley & Kemsley, Barling, Great Wakerling; s. Cressing Powerful 1883, d. Barling Daisy 4186 by Lashley Soviet 363.
- 3328 R. N.—HAROLD S. STORRY, Harewood, Leeds, for Rollesby Lady. H. C.—3327.

Class 373.—Essex Sows, born in 1927.¹

- 3342 I. (#10, & Champion.)—J. REGINALD TINNEY, Rickling, Newport, Essex, for Rickling Treasure 15th 17970 (10451), born Jan. 12; s. Barling Sultan 1493, d. Rickling Treasure 13th 17576 by Cressing Claudius 2nd 2267.
- 3340 II. (#5.)—J. REGINALD TINNEY, for Rickling Emerald 10th 19114 (1439), born Jan. 28; s. Barling Sultan 1493, d. Rickling Emerald 7th 14160 by Barnston Belgnier 771.
- 3333 III. (#3.)—A. J. COUSINS, Cressing Lodge, Braintree, for Cressing Duchess 88th 18382 (982), born Jan. 5; s. Cressing Angus 16th 2243, d. Cressing Duchess 51st 18760 by Cressing Angus 2nd 1839.
- 3331 IV. (#2.)—H. S. ASHTON, Trueloves, Ingatstone, for Trueloves Lightsome 18406 (1184), born March 6; s. Barling Governor 2493, d. Trueloves Goldfinch 15406 by Cressing Major 3rd 1563.
- 3337 V. (#1.)—WILLIAM RITCHIE, Marks Hall, Margaret Roding, Dunmow, for Roothing Biddy 18712 (1835), born July 3; s. Pan Ernest 2693, d. Barling Biddy 15948 by Cressing Duke 7th 2271.
- 3335 R. N.—KEMSLEY & KEMSLEY, Crouchmans Farm, Shoeburyness, for Barling Plover. H. C.—3334.

Class 374.—Essex Sows, born in 1928.

- 3346 I. (#10.)—KEMSLEY & KEMSLEY, Crouchmans Farm, Shoeburyness, for Barling Osprey 19128 (1580), born Jan. 8; s. Barling Colonel 2793, d. Fryerning Floret 11496 by Barnston Claudius 1st 7.
- 3349 II. (#5.)—J. REGINALD TINNEY, Rickling, Newport, Essex, for Rickling Treasure 17th 19116 (1438), born Jan. 22; s. Roothing Laughter 10th 3143, d. Rickling Treasure 12th 17574 by Cressing Claudius 2nd 2267.
- 3350 III. (#3.)—J. REGINALD TINNEY, for Rickling Treasure 18th 19118 (1440), born Jan. 22; s. Roothing Laughter 10th 3143, d. Rickling Treasure 12th 17574 by Cressing Claudius 2nd 2267.

¹ Silver Champion Cup, given by the Essex Pig Society, for the best Boar or Sow.

² Prizes except Fourth and Fifth, given by the Essex Pig Society.

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- 3343 IV. (22).—H. S. ASHTON, Trueloves, Ingatstone, for Trueloves Maid 19104 (1533), born Jan. 3; s. Rickling Angus 1st 3015, d. Trueloves Gushing 15430 by Fryerning Generosity 1881.
3347 R. N.—WILLIAM ALFRED LYON, Foxton House, Royston, for Foxton Duchess 2nd. H. C.—3348.

Long White Lop-Eared.

Class 375.—Long White Lop-Eared Boars, born in or before 1926.

- 3352 I. (210).—H. E. BENNETT, Holt Castle Farm, Worcester, for Harborton Honour 1162, born July 6, 1925, bred by H. Tope, Hatterville, Ipplepen, Newton Abbot, Devon; s. Harborton Honesty 518, d. Harborton Bo-peep 799.
3354 II. (25).—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for Afton Gay Boy 1122, born Jan. 15, 1926, bred by Mr. Pearce, Afton, Totnes; s. Yealmpstone Sunday 958, d. Coryton Beauty 2863 by Coryton General 532.
3353 III. (23).—WILLIAM BRACEY, Manor House, Martham, Great Yarmouth, for Flegg Confidence 1410, born Nov. 1, 1926; s. Ford Confidence 1018, d. Godwell Mary 3803 by Ipplepen Sultan 552.
3356 R. N.—W. H. NEAL, Walreddon Farm, Tavistock, for Yealmpstone Ben 4th. H. C.—3355.

Class 376.—Long White Lop-Eared Boars, born in 1927.

- 3353 I. (210).—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for Yealmpstone Captain 1596, born March 14, bred by W. H. Neal, Yealmpstone, Plympton; s. Axworthy Captain 1370, d. Yealmpstone Princess 4th 413 by Quither General 2.
3360 II. (25).—W. H. NEAL, Walreddon Farm, Tavistock, for Yealmpstone Ben 7th 1550, born Jan. 11; s. Axworthy Captain 1370, d. Yealmpstone Princess 73.
3361 III. (23).—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for Godwell Model 5th 1634, born April 14, bred by W. J. Westlake & Son, Godwell; s. Godwell Bob 1224, d. Godwell Daisy 3849 by Lukeland Hero 342.
3357 R. N.—GEORGE H. EUSTICE, for Afton Baron. H. C.—3359.

Class 377.—Long White Lop-Eared Boars, born in 1928.

- 3365 I. (210).—A. PARTRIDGE & SONS, Mordref, Plympton, Devon, for Priory Rent Fayer 6th 1692, born Feb. 1; s. Priory Mill Man 7th 1216, d. Priory Amiable 14th 4601 by Quither Marquis 746.
3367 II. (25).—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for Godwell Dandy 1676, born Jan. 8, bred by W. J. Westlake & Son, Godwell; s. Godwell Sultan 2nd 1114, d. Godwell Beauty 8th 4859 by Yealmpstone Ben 3rd 938.
3364 III. (23).—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for Bezurrell Hero 1688, born Jan. 7; s. Erme Hero 1st 1056, d. Bezurrell Mary 4th 4321 by Afton Gay Boy 1122.
3363 R. N.—WILLIAM BRACEY, Manor House, Martham, Great Yarmouth, for Flegg Baronet 1st. H. C.—3362, 3365. C.—3366, 3369.

Class 378.—Long White Lop-Eared Breeding Sows, born in or before 1926.

- 3375 I. (210, & Champion).—W. W. WOOLLAND, Baydon Manor, Ramabury, Wilts, for Devonshire Duchess 7th 4777, born March 24, 1926, farrowed Feb. 2, 1928, bred by H. J. Kingwell, Totnes, Devon; d. Yealmpstone Sunday 958, d. Devonshire Duchess 2165 by Yealmpstone Pan Yan 148.
3376 II. (25, & E. N. for Champion).—W. W. WOOLLAND, for Devonshire Duchess 8th 4779, born March 24, 1926, farrowed Jan. 29, 1928, bred by H. J. Kingwell, Totnes, Devon; s. Yealmpstone Sunday 958, d. Devonshire Duchess 2165 by Yealmpstone Pan Yan 148.
3371 III. (23).—CAPT. N. MILNE-HARROP, Garthgynan, Ruthin, for Devonshire Fashion 5111, born July 2, 1928, farrowed Jan. 8, 1928, bred by H. J. Kingwell, Bow Grange, Totnes; s. Yealmpstone Sunday 958, d. Devonshire Empress 3417 by Yealmpstone Pan Yan 148.
3374 R. N.—W. W. WOOLLAND, for Devonshire Duchess 6th. H. C.—3370, 3372, 3373.

Class 379.—Long White Lop-Eared Sows, born in 1927.²

- 3381 I. (210).—W. H. NEAL, Walreddon Farm, Tavistock, for Yealmpstone Vanity 2nd 4886, born Feb. 19; s. Axworthy Captain 1370, d. Anderson Apricot 4th 2833.
3382 II. (25).—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for Godwell Beauty 8th 4859, born Jan. 8, bred by W. J. Westlake & Son Godwell; s. Yealmpstone Ben 3rd 938, d. Colwel Bobby 3205 by Harborton Premier 86.
3379 III. (23).—CAPT. N. MILNE-HARROP, Garthgynan, Ruthin, for Gwersyllt Beauty 2nd 5333, born Aug. 19; s. Priory Masterpiece 1084, d. Godwell Beauty 5th 3768 by Ipplepen Sultan 552.
3383 R. N.—WILLIAM J. WESTLAKE, for Godwell Beauty 16th. H. C.—3377, 3378.

¹ The "Baydon" Silver Challenge Cup, given through the National Long White Lop-eared Pig Society, for the best Boar or Sow.

² Prizes given by the National Long White Lop-eared Pig Society.

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Class 380.—Long White Lop-Eared Sows, born in 1928.

- 3385 I. (£10).—WILLIAM BRACEY, Manor House, Martham, Great Yarmouth, for Flegg White Heather 7th 5527, born Jan. 13; s. Flegg Confidence 1410, d. Flegg White Heather 2nd 4941 by Yealmpstone Pan Yan 148.
- 3388 II. (£5).—GEORGE H. EUSTICE, Bezurrell, Gwinear, Hayle, for Bezurrell Mona 5573, born Jan. 7; s. Erne Hero 1st 1056, d. Bezurrell Mary 4th 4821 by Afton Gay Boy 1122.
- 3391 III. (£3).—A. PARTRIDGE & SONS, Mordref, Plympton, Devon, for Priory Lassie 7th 5581, born Feb. 1; s. Priory Mill Man 7th 1218, d. Priory Amiable 14th 4601 by Quither Marquis 746.
- 3386 IV. (£2).—WILLIAM BRACEY, for Flegg White Heather 8th 5529, born Jan. 13; s. Flegg Confidence 1410, d. Flegg White Heather 2nd 4941 by Yealmpstone Pan Yan 148.
- 3393 V. (£1).—WILLIAM J. WESTLAKE, Godwell, Ivybridge, for Godwell Primrose 2nd 5549, born Jan. 8, bred by W. J. Westlake & Son, Godwell; s. Godwell Sultan 2nd 1114, d. Godwell Beauty 8th 4859 by Yealmpstone Ben 938.
- 3384 E. N.—H. E. BENNETT, Holt Castle Farm, Worcester, for Holt Castle Alma 1st.
H. C.—3389, 3394. C.—3392, 3395.

FARM AND DAIRY PRODUCE OF THE UNITED KINGDOM.

Butter.

Class 381.—Two Pounds of Fresh Butter, without any salt, made up in plain pounds, from the milk of Channel Island, Devon or South Devon Cattle and their crosses.

- 8 I. (£4).—CAPT. E. JENKINS, Netherleigh, Hayle.
- 10 II. (£2).—MRS. L. MATTHEWS, Kilkhampton, via Holsworthy.
- 18 III. (£1).—MRS. JOHN WAY, West Bridge, Bishopsmynton.
- 14 IV. (10s.).—JOHN NORTHCOTT, Colloggett, Bodmin.
- 6 V. (5s.).—F. W. B. GUBBINS, Swallowcliffe Park, Banbury.
- 1 E. N.—HIS MAJESTY THE KING, Sandringham.
H. C.—5, 11, 13. C.—7, 12, 17.

Class 382.—Two Pounds of Fresh Butter, without any salt, made up in plain pounds, from the milk of cattle of any breeds or cross other than those mentioned in Class 381.

- 20 I. (£4).—MRS. HILL, Smallwood, Sandbach.
- 24 II. (£2).—MISS S. H. ROBINSON, Red House Farm, Liverton, Loftus.
- 26 III. (£1).—MISS A. M. WARD, Foggathorpe Hall Farm, Selby.
- 25 IV. (10s.).—MISS JESSIE M. SELDON, Manheirs, Grampound.
- 22 E. N.—MRS. W. E. MUDD, Slade House, Thornthwaite, Darley, Harrogate.

Class 383.—Two Pounds of Fresh Butter, slightly salted, made up in plain pounds, from the milk of Channel Island, Devon or South Devon Cattle and their crosses.

- 39 I. (£4).—MRS. L. MATTHEWS, Kilkhampton, via Holsworthy.
- 47 II. (£2).—MRS. JOHN WAY, West Bridge, Bishopsmynton.
- 43 III. (£1).—JOHN NORTHCOTT, Colloggett, Bodmin.
- 42 IV. (10s.).—THE MARQUIS OF NORTHAMPTON, D.S.O., Castle Ashby, Northampton.
- 32 V. (5s.).—THE REV. HENRY J. BURKITT, The Rectory, Drayton Beauchamp, Aylesbury.
- 23 E. N.—HIS MAJESTY THE KING, Sandringham.
H. C.—81, 84, 40, 45.

Class 384.—Two Pounds of Fresh Butter, slightly salted, made up in plain pounds, from the milk of cattle of any breed or cross other than those mentioned in Class 383.

- 58 I. (£4).—MRS. HILL, Smallwood, Sandbach.
- 50 II. (£2).—MRS. S. J. BRADLE, Broadless Gate Farm, Newbiggin, Middleton-in-Teesdale.
- 58 III. (£1).—MISS S. H. ROBINSON, Red House Farm, Liverton, Loftus.
- 50 IV. (10s.).—MISS A. M. WARD, Foggathorpe Hall Farm, Selby.
- 59 V. (5s.).—MISS JESSIE M. SELDON, Manheirs, Grampound.
- 56 E. N.—MRS. W. E. MUDD, Slade House, Thornthwaite, Darley, Harrogate.
H. C.—52, 54.

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Class 385.—Three Pounds of Fresh Butter, slightly salted, made up in pounds in the most attractive marketable designs.

- 66 I. (24).—MRS. L. MATTHEWS, Kilkhampton, via Holsworthly.
 62 II. (22).—MRS. E. B. BEER, Puddaven, Totnes.
 72 III. (21).—MISS S. H. ROBINSON, Red House Farm, Liverton, Loftus.
 71 IV. (10s.).—THE MARQUIS OF NORTHAMPTON, D.S.O., Castle Ashby, Northampton.
 61 V. (5s.).—HIS MAJESTY THE KING, Sandringham.
 69 R. N.—J. PIERPONT MORGAN, Wall Hall, Watford.
 H. C.—65.

Cheese.

Made in 1928.

Class 386.—Two Cheshire Cheeses, Coloured, not less than 40 lb. each.

- 95 I. (25).—TOM YOUNG, Sicilly Oak Farm, Cholmondeley, Malpas.
 89 II. (23).—W. E. MOORE, Baddiley Farm, Nantwich.
 93 III. (22).—W. S. WRIGHT, The Blackhurst, Baddiley, Nantwich.
 90 IV. (10s.).—ROBERT WALKER, Russia Hall, Tattenhall, Chester.
 82 V. (5s.).—W. H. HOBSON, Woodhey Hall, Nantwich.
 74 R. N.—P. V. COOKE, Tattenhall Hall, Chester.
 H. C.—88. C.—76.

Class 387.—Two Cheshire Cheeses, Uncoloured, not less than 40 lb. each.

- 116 I. (25).—TOM YOUNG, Sicilly Oak Farm, Cholmondeley, Malpas.
 109 II. (23).—F. A. MOORE, The Grange, Checkley, Nantwich.
 99 III. (22).—R. R. COOPER, Ridley Hill Farm, Tarporley.
 103 IV. (10s.).—W. H. HOBSON, Woodhey Hall, Nantwich.
 107 V. (5s.).—GEORGE MAJOR, Manor House, Peckforton, Tarporley.
 106 R. N.—W. LEA, Lacon Hall, Wem.
 H. C.—110. C.—113.

Class 388.—Two Cheddar Cheeses, not less than 50 lb. each.

- 118 I. (25).—JOHN GIBSON, Dryburgh Dairy, Castle Douglas.
 120 II. (23).—H. H. PICKFORD, Patney, Devizes.
 119 III. (22).—SAMUEL McMINN, Torrs Dairy, Kirkcudbright.
 121 R. N.—FRANK PORTCH, Leigh Farm, Wincanton.
 H. C.—123. C.—124.

Class 389.—Two Cheddar Truckles.

- 131 I. (25).—FRANK PORTCH, Leigh Farm, Wincanton.
 129 II. (23).—SAMUEL McMINN, Torrs Dairy, Kirkcudbright.
 128 III. (22).—JOHN GIBSON, Dryburgh Dairy, Castle Douglas.
 133 IV. (10s.).—SIDNEY T. WHITE, Sock Dennis Farm, Ilchester.
 126 R. N.—GEORGE BARNES, Hatherleigh, Wincanton.
 H. C.—132. C.—134.

Class 390.—Two Staffordshire or Derbyshire Cheeses.

- 187 I. (25).—J. M. NUTTALL & Co., LTD., Dove Dairy, Hartington, Buxton.
 138 II. (23).—HERBERT RICHARDSON, The Orchards, Cotesbach, Rugby.
 136 III. (22).—EAST ANGLIAN INSTITUTE OF AGRICULTURE, Chelmsford.
 135 R. N.—CHEDDAR VALLEY DAIRY Co., LTD., Rooksbridge, Axbridge.

Class 391.—Two Leicestershire Cheeses.

- 143 I. (25).—JOHN HARRISON, Paliton, Rugby.
 144 II. (23).—P. J. HAYNES, Home Farm, Ashley Parva, Rugby.
 145 III. (22).—HENRY KNIGHT & Co., The Cheese Dairy, Seagrave, Loughborough.
 139 IV. (10s.).—J. O. BURCHNALL, Manor House, Aston Flamville, Hinckley.
 146 R. N.—HERBERT RICHARDSON, The Orchards, Cotesbach, Rugby.
 H. C.—147. C.—140.

Class 392.—Two Stilton Cheeses.

- 153 I. (25).—J. M. NUTTALL & Co., LTD., Dove Dairy, Hartington, Buxton.
 155 II. (23).—HENRY THOMPSON & SONS, LTD., Nether Broughton, Melton Mowbray.
 150 III. (22).—J. H. B. GREAVES, Manor Farm Dairy, Nether Broughton, Melton Mowbray.
 151 IV. (10s.).—MISS ISABELLA MCNAIR, The Dairy, Wymeswold, Loughborough.
 157 V. (5s.).—UNITED DAIRIES (WHOLESALE), LTD., Harby, Melton Mowbray.
 158 R. N.—UNITED DAIRIES (WHOLESALE), LTD., Swebstone, Leicester.
 H. C.—162. C.—148.

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Class 393.—Two Wensleydale Cheeses, Stilton shape.

- 164 I. (25).—MISS BETTY JANE MUDD, Aldborough Dairy, Boroughbridge.
 165 II. (23).—J. M. NUTTALL & Co., LTD., Dove Dairy, Hartington, Buxton.
 166 III. (22).—A. ROWNTREE & SON, Coverham, Middleham.
 163 E. N.—MISS RACHEL JAMES, Great Llanccayo, Usk.

Class 394.—Two Caerphilly Cheeses.

- 176 I. (25).—JENKIN JONES, Cwm, Crickhowell.
 175 II. (23).—MRS. T. JOHN, Ruthin Farm, Llanillid, Pencoed, Bridgend.
 174 III. (22).—MISS RACHEL JAMES, Great Llanccayo, Usk.
 172 IV. (10a).—MRS. W. HARRIS, Glenusk, Nantydeny, Abergavenny.
 171 E. N.—MISS CELIAN EDWARDS, Cefn Poeth, Llanfedw, Cardiff.
 H. C.—173. C.—169.

Class 395.—Two Small Cheeses, not exceeding 6 lb. each, of Cheddar or Cheshire character.

- 180 I. (24).—MISS CELIAN EDWARDS, Cefn Poeth, Llanfedw, Cardiff.
 180 II. (22).—FRANK PORTON, Leigh Farm, Wincanton.
 184 III. (21).—W. E. MOORE, Baddiley Farm, Nantwich.
 188 IV. (10a).—H. S. and W. G. WHITTAKER, Wardle Bridge Farm, Nantwich.
 185 V. (5a).—H. H. PICKFORD, Patney, Devizes.
 178 E. N.—CHEDDAR VALLEY DAIRY CO., LTD., Rooksbridge, Axbridge.
 H. C.—183. C.—182.

Class 396.—Two Small Cheeses, not exceeding 6 lb. each, of Stilton or Wensleydale character.

- 191 I. (24).—J. M. NUTTALL & Co., LTD., Dove Dairy, Hartington, Buxton.
 197 II. (22).—WEBSTER & RICHARDSON, Hickling Lodge, Kinoulton.
 195 III. (21).—FRED WEBSTER, Shoby Priory, Melton Mowbray.
 193 IV. (10a).—J. W. SIMPSON, West Arrathorne, Catterick.
 194 E. N.—HENRY THOMPSON & SONS, LTD., Nether Broughton, Melton Mowbray.
 H. C.—195. C.—192.

Class 397.—Two Soft Cheeses, made from whole milk.

- 199 I. (24).—G. R. H. BISHOP, The Hall Farm, Ullesthorpe, Rugby.
 203 II. (22).—MISS DOROTHY HODGSON, Hall Farm Dairy, Ullesthorpe, Rugby.
 202 III. (21).—EAST ANGLIAN INSTITUTE OF AGRICULTURE, Chelmsford.
 205 IV. (10a).—JENKIN JONES, Cwm, Crickhowell.
 209 V. (5a).—FRED WEBSTER, Shoby Priory, Melton Mowbray.
 207 E. N.—FRANCIS W. TOMLINSON, Hall Farm Dairy, Ullesthorpe, Rugby.
 H. C.—198. C.—208.

Class 398.—Two Cheeses, made from cream without the addition of rennet.

- 210 I. (24).—HIS MAJESTY THE KING, Sandringham.
 214 II. (22).—MISS M. L. GORDON, 51A Ashby Road, Loughborough.
 212 III. (21).—EAST ANGLIAN INSTITUTE OF AGRICULTURE, Chelmsford.
 215 E. N.—THE MARQUIS OF NORTHAMPTON, D.S.O., Castle Ashby, Northampton.
 H. C.—213. C.—211.

Cider.

Class 399.—Six Bottles of Dry Cider made in 1927.

- 244 I. (23).—WICKWAR CIDER CO., LTD., Wickwar, Glos.
 234 II. (22).—RIDLER & SON, Clehonger Manor, Hereford.
 218 III. (21), & 219 IV. (10a).—SIR IAN HEATHCOTE AMORY, BART., Knights Hayes Court, Tilverton.

Class 400.—Six Bottles of Sweet Cider, made in 1927.

- 253 I. (23), & 252 II. (22).—CAPT. F. W. CRAWSHAY, Hempnall Cider Factory, Norwich.
 255 III. (21), 264 I. (10a), & 266 V. (5a).—RIDLER & SON, Clehonger Manor, Hereford.
 C.—246, 274.

Class 401.—Six Bottles of Cider, made previous to 1927.

- 254 I. (23), & 255 II. (22).—RIDLER & SON, Clehonger Manor, Hereford.
 257 III. (21), & 258 IV. (10a).—SEVERN VALE CIDER CO., LTD., Bushley, Tewkesbury.
 261 V. (5a).—WICKWAR CIDER CO., Wickwar, Glos.
 C.—276.

cxlviii *Awards of Prizes for Produce at Nottingham, 1928.*

Wool.¹

Of 1928 clip.

First Prize, £3 ; Second Prize, £2 ; Third Prize, £1 ; in each Class.

Class 402.—Three Fleeces of Oxford Down Wool.

- 294 I. & 293 II.—J. AND R. HARRISON, Gainford Hall, Gainford, S.O., Co. Durham.
296 III.—HUGH W. STILGOE, The Grounds, Adderbury, Banbury.

Class 403.—Three Fleeces of Shropshire Wool.

- 303 I. & R. N. for Champion,² & 304 II.—E. CRAIG TANNER, Eytton-on-Severn, Wroxeter, Salop.
297 III.—LT.-COL. E. C. ATKINS, Stretton House, Hinckley.
H. C.—299. C.—301.

Class 404.—Three Fleeces of Southdown Wool.

- 309 I. & 308 II.—J. PIERPONT MORGAN, Wall Hall, Watford.
305 III.—HIS MAJESTY THE KING, Sandringham.

Class 405.—Three Fleeces of Hampshire Down Wool.

- 313 I. & 312 II.—WILLIAM TODD, Little Ponton Grange, Grantham.
310 III.—MAJOR AND MRS. JERVOISE, Herriard Park, Basingstoke.

Class 406.—Three Fleeces of Suffolk Wool.

- 318 I. & 319 II.—MAJ.-GEN. LORD TREOWEN, C.B., C.M.G., Llanover, Abergavenny.
315 III.—HOLLESLEY BAY LABOUR COLONY, Hollesley.
H. C.—314.

Class 407.—Three Fleeces of Dorset Down Wool.

- 321 I. & 320 II.—LEONARD TORY, Turnworth, Blandford.

Class 408.—Three Fleeces of Dorset Horn Wool.

- 324 I. & Champion,³ & 325 II.—ALFRED READ, Lower Farm, Hilton, Blandford.
323 III.—GEORGE MAYO, Coker's Frome, Dorchester.

Class 409.—Three Fleeces of Ryeland Wool.

- 326 I. & 327 II.—DAVID J. THOMAS, Monachty, Abergavenny.

Class 410.—Three Fleeces of Kerry Hill (Wales) Wool.

- 333 I. & 332 II.—THE MARQUESS OF LONDONDERRY, K.G., M.V.O., Plas, Machynlleth.
329 III.—F. B. JONES, Whitehall, Usk.
H. C.—331. C.—334.

Class 411.—Three Fleeces of Lincoln Wool.

- 336 I. & 337 III.—MAJOR W. H. RAWNSLEY, Well Vale, Alford, Lincs.
335 II.—CLIFFORD NICHOLSON, Worlaby House, Brigg.

Class 412.—Three Fleeces of Leicester Wool.

- 339 I. & Champion,³ & 338 II.—J. and R. HARRISON, Gainford Hall, Gainford, co. Durham.

Class 413.—Three Fleeces of Border Leicester Wool.

[No Entry.]

Class 414.—Three Fleeces of Wensleydale Wool.

- 342 I.—JOHN A. WILLIS, Manor House, Carperby.
340 II.—J. B. SMALLEY, Birkby Hall, Cark-in-Cartmel.

Class 415.—Three Fleeces of Kent or Romney Marsh Wool, from Rams of any age.

- 347 I. & R. N. for Champion.⁴—J. EGERTON QUESTED, The Firs, Charlton, Kent.

¹ The Second and Third Prizes in these Classes were given by the respective Flock Book Societies.

² Special Cash Prize, known as the "Merchants of the Staple of England" Prize, given for the best fleece taken from any short-woolled breed of sheep.

³ Special Cash Prize, known as the "Merchants of the Staple of England" Prize, given for the best fleece taken from any long-woolled breed of sheep.

- 346 II.—THE EARL OF GUILFORD, Waldershare Park, Dover.
 344 III.—ARTHUR FINN, Westbroke House, Lydd.
 C.—345.

Class 416.—Three Fleeces of Kent or Romney Marsh Wool, from Ewe Tegs.

- 355 I.—ASHLEY STEVENS, Davington Hall, Faversham.
 349 II.—E. W. BAKER, Parsonage Farm, Bekesbourne, Canterbury.
 351 III.—THE EARL OF GUILFORD, Waldershare Park, Dover.
 H. C.—354. C.—353.

Class 417.—Three Fleeces of Kent or Romney Marsh Wool, excluding Rams and Ewe Tegs.

- 359 I.—THE EARL OF GUILFORD, Waldershare Park, Dover.
 357 II. & 358 III.—L. H. and G. W. FINN, The Mall, Faversham.
 H. C.—356.

Class 418.—Three Fleeces of Black Welsh Mountain Wool.

- 363 I. & 362 II.—MRS. JERVOISE, Herriard Park, Basingstoke.
 364 III.—MAJ.-GEN. LORD TREWEN, C.B., C.M.G., Llanover, Abergavenny.

POULTRY.

By "Cock," "Hen," and "Gander," "Goose," are meant birds hatched previous to January 1, 1928; and by "Cockerel" and "Pullet" are meant birds hatched in 1928.

The Prizes in each Class are as follows: First Prize, 40s. Second Prize, 30s.

Third Prize, 20s. Fourth Prize, 10s. Fifth Prize, 5s.

Special Prizes were given in the Poultry Classes by the following Clubs: Dorking, Sussex, Columbian Wyandotte, Buff Orpington, British Barnevelder, British Rhode Island Red, British Black Leghorn, and Indian Runner Duck.

Class 419.—Dorking Cocks.

- 2 I. & Special & 4 R. N.—A. J. MAJOR, Ditton, Langley, Bucks.
 1 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 3 III.—RALPH ALTY, Gravel Farm, Croston, Preston.

Class 420.—Dorking Hens.

- 6 I.—WILFRED R. OATEY, Chacewater, Truro.
 7 II.—RALPH ALTY, Gravel Farm, Croston, Preston.
 6 III.—A. J. MAJOR, Ditton, Langley, Bucks.
 5 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 H. C.—8.

Class 421.—Dorking Cockerels.

- 10 I. & R. N. for Special, & 12 II.—A. J. MAJOR, Ditton, Langley, Bucks.
 13 III.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 11 R. N.—JAMES ROGERS, Farneth, Blairgowrie.

Class 422.—Dorking Pullets.

- 16 I.—JAMES ROGERS, Farneth, Blairgowrie.
 18 II.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 14 III. & 17 R. N.—A. J. MAJOR, Ditton, Langley, Bucks.
 H. C.—15.

Class 423.—Croad Langshan Cocks or Cockerels.

- 19 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 29 II.—R. ANTHONY, Home Farm, Buxton, Chorley.
 25 III.—W. SWINDELL & SON, Matlock Green, Matlock.
 22 IV.—DR. W. P. GRELLERT, Orford Lodge, Hitchin.
 26 R. N.—ALFRED GIDDINGS, Hillcrest, Chapel-en-le-Frith.
 H. C.—27. C.—20.

Class 424.—Croad Langshan Hens or Pullets.

- 30 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 37 II.—R. ANTHONY, Home Farm, Buxton, Chorley.
 31 III. & 36 R. N.—ALFRED GIDDINGS, Hillcrest, Chapel-en-le-Frith.
 H. C.—38. C.—34.

cl *Awards of Poultry Prizes at Nottingham, 1928.*

Class 425.—*Brahma or Cochín Cocks or Cockerels.*

- 38 I. & 42 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 44 II.—SID BUTLER, 3 Market Place, Whitton, Twickenham.
 43 III.—COL. R. S. WILLIAMSON, The Grange, Rawnsley, Stafford.
 H. C.—39. C.—40.

Class 426.—*Brahma or Cochín Hens or Pullets.*

- 47 I.—R. ANTHONY, Home Farm, Euxton, Chorley.
 45 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 46 III.—MRS. W. THOMPSON, Old Chilwell, Notts.

Class 427.—*Red Sussex Cocks.*

- 50 I. & R. N. for Special, & 55 III.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 51 II.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 52 R. N.—MRS. COLDWELL, Spring Grove, Milverton.

Class 428.—*Red Sussex Hens.*

- 59 I. & Special, & 62 II.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 56 III.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 61 R. N.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 H. C.—58.

Class 429.—*Red Sussex Cockerels.*

- 67 I., 66 II., 63 III. & 65 R. N.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold.
 H. C.—64.

Class 430.—*Red Sussex Pullets.*

- 71 I., 69 III. & 73 R. N.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 74 II.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 H. C.—68. C.—72.

Class 431.—*Light Sussex Cocks.*

- 76 I., Special, & Cup.¹—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 78 II.—MRS. F. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 86 III.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 82 IV.—COL. D. A. CHAYTOR, Pooley Hall, Polesworth, Tamworth.
 81 R. N.—R. P. PERCIVAL, Shuttington House, Tamworth.
 H. C.—79.

Class 432.—*Light Sussex Hens.*

- 87 I., R. N. for Special & R. N. for Cup,¹ 93 II. & 90 IV.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 89 III.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 86 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 H. C.—88, 94. C.—91.

Class 433.—*Light Sussex Cockerels.*

- 100 I.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 108 II. & 99 R. N.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 103 III.—W. R. YOUNGER, Auchen Castle, Moffat.
 111 IV.—W. GOODRIDGE, Wormald Green, Harrogate.
 97 V.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 H. C.—105, 107. C.—102, 115.

Class 434.—*Light Sussex Pullets.*

- 121 I. & 125 III.—MRS. J. G. MORRIS, Blewburton Hall, Aston Tirrold, Berks.
 127 II.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 138 IV.—HENRY UNDERWOOD, Mowhurst Poultry Farm, Edenbridge.
 117 V.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 136 R. N.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 H. C.—123, 133. C.—116, 120, 129, 132.

Class 435.—*Speckled Sussex Cocks.*

- 140 I. & Special.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 141 II.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 143 III.—FRANCIS C. TOMKINS, The Bell Hotel, Ely.
 142 R. N.—A. W. H. LOVELESS, Priors, Keston, Kent.

¹ The Crawshaw Memorial Cup, given through the Sussex Poultry Club, for the best Light Sussex.

Class 436.—Speckled Sussex Hens.

- 151 I.—FRANCIS C. TOMKINS, The Bell Hotel, Ely.
 144 II.—R. P. PERCIVAL, Shutlington House, Tamworth.
 140 III. & 145 R. N.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 H. C.—148. C.—146.

Class 437.—Speckled Sussex Cockerels.

- 154 I.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.

Class 438.—Speckled Sussex Pullets.

- 157 I. & R. N. for Special.—A. W. H. LOVELESS, Priors, Keston, Kent.
 156 II.—W. R. ABBEY, Croft Farm, Hessay, York.
 161 III.—H. NEWMAN, 4, Alexander Parade, Colney Hatch Lane, Muswell Hill, London, N.
 159 R. N.—W. R. YOUNGER, Auchen Castle, Moffat.

Class 439.—Brown Sussex Cocks.

- 163 I. & R. N. for Special, 165 II. & 169 III.—CHARLES HARDY, Argos Hill, Rotherfield.
 166 R. N.—W. R. YOUNGER, Auchen Castle, Moffat.
 H. C.—167. C.—168.

Class 440.—Brown Sussex Hens.

- 174 I. & Special.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 171 II., 177 III. & 175 R. N.—CHARLES HARDY, Argos Hill, Rotherfield.
 H. C.—172. C.—170.

Class 441.—Brown Sussex Cockerels.

- 170 I.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 182 II., 178 III. & 180 R. N.—CHARLES HARDY, Argos Hill, Rotherfield.
 H. C.—181.

Class 442.—Brown Sussex Pullets.

- 189 I. & 187 R. N.—CHARLES HARDY, Argos Hill, Rotherfield.
 183 II.—A. J. FALKENSTEIN, Northover, Cross-in-Hand, Sussex.
 188 III.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 H. C.—184. C.—186.

Class 443.—Buff Sussex Cocks or Cockerels.

- 191 I. & Special, & 193 III.—A. HOWARD, Chantecler Poultry Farm, Maldenhead.
 192 II. & R. N. for Special.—W. H. HOLLAND, Riverside, Bidford-on-Avon.
 194 R. N.—JOHN M. JOHNSTON, Exbury, Southampton.

Class 444.—Buff Sussex Hens or Pullets.

- 196 I. & 200 II.—A. HOWARD, Chantecler Poultry Farm, Maldenhead.
 197 III.—N. C. LAWRENCE, Hildon, Reading Road, Wokingham.
 199 R. N.—JOHN M. JOHNSTON, Exbury, Southampton.
 H. C.—198. C.—196.

Class 445.—White Wyandotte Cocks.

- 201 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 206 II. & 202 III.—R. ANTHONY, Home Farm, Euxton, Chorley.
 204 R. N.—F. BARSON, The Nook, Asfordby, Melton Mowbray.
 H. C.—205. C.—203.

Class 446.—White Wyandotte Hens.

- 207 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 208 II. & 212 III.—R. ANTHONY, Home Farm, Euxton, Chorley.
 210 R. N.—HUGH GUNN, Castle Villa Poultry Farm, Gloucester.
 H. C.—209.

Class 447.—White Wyandotte Cockerels.

- 213 I. & 218 III.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 220 II. & 215 R. N.—R. ANTHONY, Home Farm, Euxton, Chorley.
 H. C.—217. C.—214.

Class 448.—White Wyandotte Pullets.

- 221 I. & 227 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 228 II.—HUGH GUNN, Castle Villa Poultry Farm, Gloucester.
 224 III.—GAYBIRD, LTD., Prestwood, Great Missenden.
 229 IV.—R. ANTHONY, Home Farm, Euxton, Chorley.
 H. C.—222. C.—223.

Class 449.—Gold or Silver Laced Wyandotte Cocks or Cockerels.

- 235 I. & 232 III.—R. ANTHONY, Home Farm, Euxton, Chorley
 231 II.—ALBERT HOLDEN, Shottle House, Shottle Gate, Derby.
 230 R. N.—B. and A. BEE, Bulsnape Hall, Gooanargh, Preston.
 H. C.—233.

Class 450.—Gold or Silver Laced Wyandotte Hens or Pullets.

- 243 I. & 239 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 238 III.—MISS B. T. LONGE, Abbot's Hall, Stowmarket.
 240 IV.—HERBERT SPENSLEY, Oaks Farm, Menston-in-Wharfedale.
 241 R. N.—J. K. CHURCH, Fairholme, Horley.
 H. C.—237. C.—245.

Class 451.—Columbian Wyandotte Cocks or Cockerels.

- 246 I. & Cup, & 251 II. & R. N. for Cup.—R. P. PERCIVAL, Shuttington House, Tamworth.
 256 III.—W. HARRIS, Little Gables, Keynsham, Somerset.
 250 IV.—S. T. READ, 40 China Street, Bulwell, Nottingham.
 253 R. N.—FRED BROWN, Woodside, Grimscars, Huddersfield.
 H. C.—248. C.—252.

Class 452.—Columbian Wyandotte Hens or Pullets.

- 257 I. & Spoon.—S. T. READ, 40 China Street, Bulwell, Nottingham.
 259 II. & R. N. for Spoon, & 264 IV.—FRED BROWN, Woodside, Grimscars, Huddersfield.
 265 III.—W. HARRIS, Little Gables, Keynsham, Somerset.
 262 R. N.—T. H. SHELDON, Farndon House, Newark.
 H. C.—263. C.—266.

Class 453.—Wyandotte Cocks or Cockerels, any other colour.

- 276 I.—R. ANTHONY, Home Farm, Euxton, Chorley.
 267 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 274 III.—S. C. ROBERTSHAW, Briglands, Wray, Lancaster.
 269 IV.—GAYBIRD, LTD., Prestwood, Great Missenden.
 271 R. N.—F. SARSON, The Nook, Asfordby, Melton Mowbray.
 H. C.—268. C.—277.

Class 454.—Wyandotte Hens or Pullets, any other colour.

- 280 I.—J. A. BOARDLEY, Slyne Road, Lancaster.
 283 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 278 III.—COL. R. S. WILLIAMSON, The Grange, Rawusley, Stafford.
 282 R. N.—J. H. SPURR, 105 Wellington Street, Kettering.
 H. C.—281. C.—279.

Class 455.—Buff Orpington Cocks.

- 284 I. & Special.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 286 II. & R. N. for Special.—R. ANTHONY, Home Farm, Euxton, Chorley.
 291 III.—BERNARD BROOKS, The Homestead, Lower Peover, Knutsford.
 289 R. N.—COOK'S POULTRY FARM, LTD., Orpington.
 H. C.—286. C.—290.

Class 456.—Buff Orpington Hens.

- 292 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 294 II.—COOK'S POULTRY FARM, LTD., Orpington.
 296 III. & 293 R. N.—W. J. GOLDING, Bownes, Penhurst.
 H. C.—295.

Class 457.—Black Orpington Cocks.

- 302 I.—PERCY T. TICH, Mill Farm, Ingworth, Norwich.
 299 II.—MISS N. SHANKS, Stetchworth, Newmarket.
 298 III.—J. DAVISON & SONS, South Road Nursery, Bishop Auckland.
 297 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 H. C.—301. C.—300.

Class 458.—Black Orpington Hens.

- 303 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 305 II.—MISS N. SHANKS, Stetchworth, Newmarket.
 306 III.—THOMAS C. PINNIGER, The Walnuts, Westbury.
 307 R. N.—THOMAS HOYLE, Savile Royd, Halifax.
 H. C.—303.

Class 459.—Orpington Cocks, any other colour.

- 309 I.—H. WHITLEY, Primley, Paignton.

Class 460.—Orpington Hens, any other colour.

- 312 I. & 310 III.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
311 II.—R. ANTHONY, Home Farm, Euxton, Chorley.

Class 461.—Orpington Cockerels, any colour.

- 313 I.—W. J. GOLDING, Bowens, Penshurst.
315 II.—PERCY T. TICE, Mill Farm, Ingworth, Norwich.
316 III.—J. D. KAY, Stetchworth, Newmarket.
314 R. N.—W. COOK & SONS, St. Mary Cray.

Class 462.—Orpington Pullets, any colour.

- 319 I.—PERCY T. TICE, Mill Farm, Ingworth, Norwich.
317 II.—W. J. GOLDING, Bowens, Penshurst.
318 III.—W. COOK & SONS, St. Mary Cray.

Class 463.—Australorp Cocks or Cockerels.

- 320 I. & 325 V.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames.
328 II.—GEORGE W. ROBINSON, Orchard Poultry Farm, Barton, Yorks.
323 III.—MRS. A. M. PAPE, Shrewton House, Shrewton.
326 IV.—MRS. M. MUGELI, Marsden House, High Lane, Stockport.
322 R. N.—MISS M. MYOTT, The Oxhay, Biddulph, Stoke-on-Trent.
H. C.—331. C.—324.

Class 464.—Australorp Hens or Pullets.

- 341 I. & 337 R. N.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames.
336 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
347 III.—MRS. A. M. PAPE, Shrewton House, Shrewton.
339 IV.—MRS. M. MUGELI, Marsden House, High Lane, Stockport.
343 V.—GEORGE W. ROBINSON, Orchard Poultry Farm, Barton, Yorks.
H. C.—344. C.—342.

Class 465.—Double-Laced or Partridge Barnevelder Cocks or Cockerels.

- 352 I. & Special, & 357 R. N.—MRS. A. M. PAPE, Shrewton House, Shrewton.
365 II. & R. N. for Special.—W. A. SLOCOCK, Red Lodge, Kingfield, Woking.
363 III.—MRS. HUNTINGTON, Wellesbourne House, Warwick.
H. C.—366. C.—355.

Class 466.—Double-Laced Barnevelder Hens or Pullets.

- 368 I. & Special, & 378 II. & R. N. for Special.—MRS. A. M. PAPE, Shrewton House, Shrewton.
379 III.—THOMAS HODGSON & SON, Redsholm Farm, Cotherstone, Darlington.
367 R. N.—LADY BROMLEY WILSON, Nabwood, Windermere.
H. C.—381. C.—369.

Class 467.—Partridge Barnevelder Hens or Pullets.

- 386 I. & Special.—MRS. MANWARING, 4 Knole Paddock, Sevenoaks.
384 II. & R. N. for Special.—F. SHADWELL CLERKE, Overhill Stook Poultry Farm, Wolverley, Kidderminster.
385 III.—JAMES LILBURN, Craigforth, Earlsferry, Elie, Fife.
388 R. N.—HORLEY LODGE POULTRY FARM, Horley.

Class 468.—Black Barnevelder Cocks or Cockerels.

- 390 I. & Special.—WALTER C. PAYNE, The Chalet, Weston, Stevenage.
389 II. & R. N. for Special.—ARTHUR SNOWDEN, Clayton Hall Poultry Farm, Crosshills, Yorks.
391 III.—D. E. SHADRACH, Radbrook, Shrewsbury.

Class 469.—Black Barnevelder Hens or Pullets.

- 394 I. & Special.—WALTER C. PAYNE, The Chalet, Weston, Stevenage.
392 II. & R. N. for Special, & 396 III.—ARTHUR SNOWDEN, Clayton Hall Poultry Farm, Crosshills, Yorks.
395 R. N.—D. E. SHADRACH, Radbrook, Shrewsbury.
H. C.—393. C.—397.

Class 470.—British Rhode Island Red Single Comb Cock.

- 401 I. & R. N. for Special.—G. EXLEY, 97 Poppleton Road, York.
399 II.—W. R. ABBEY, Croft Farm, Hessay, York.
409 III.—RICHARD MOORE, Hammer House, Sutton Bridge, Wisbech.
414 IV.—R. HOWARD, Millfield Poultry Farm, Thingwall, Birkenhead.
413 V.—C. W. ALLSOE, Upper Hartshay, Heage, Balper, Derby.
411 R. N.—GEORGE SCOTT, Fearless Poultry Farm, Mirdfield.
H. C.—402, 403, 406, 412. C.—405, 407, 408.

oliv *Awards of Poultry Prizes at Nottingham, 1928.*

Class 471.—British Rhode Island Red Single Comb Hens.

- 417 I. & R. N. for Special.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 425 II.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 424 III.—W. ROGER SMITH, Lapley House, Stafford.
 426 IV. & 418 R. N.—W. R. ABBEY, Croft Farm, Hessay, York.
 419 V.—G. EXELBY, 97 Poppleton Road, York.
 H. C.—422, 427, 429. C.—421, 423, 428.

Class 472.—British Rhode Island Red Single Comb Cockerels.

- 438 I. & Special, & 442 R. N.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 431 II.—W. R. ABBEY, Croft Farm, Hessay, York.
 434 III.—RICHARD MOORE, Hammer House, Sutton Bridge, Wisbech.
 443 IV.—HARRY P. DAY, Guilden Morden, Royston.
 498 V.—MISS M. E. MICHIE, Titchborne, Alresford.
 H. C.—430, 435. C.—433, 440, 441.

Class 473.—British Rhode Island Red Single Comb Pullets.

- 448 I. & Special.—W. R. ABBEY, Croft Farm, Hessay, York.
 458 II.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 456 III.—CAPT. A. T. HINGSTON, Dunsford, Exeter.
 452 IV.—W. ROGER SMITH, Lapley House, Stafford.
 461 V.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 465 R. N.—R. HOWARD, Millfield Poultry Farm, Thingwall, Birkenhead.
 H. C.—453, 454, 455, 464, 467, 471, 474, 508.
 C.—457, 459, 460, 470, 472.

Class 474.—British Rhode Island Red Rose Comb Cocks.

- 482 I.—C. W. ALLSOP, Upper Hartshay, Heage, Belper, Derby.
 477 II.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 476 III.—J. and D. CARMICHAEL, 39 Belstane Road, Carlisle.
 478 R. N.—F. W. N. GODDARD, Sun Street, Hitchin.
 H. C.—480, 481. C.—479.

Class 475.—British Rhode Island Red Rose Comb Hens.

- 488 I.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 484 II.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 486 III.—JAMES W. BEARD, Skegby, Mansfield.
 485 IV.—ISHERWOOD & Co., Durrant Close, Tenterden.
 491 R. N.—C. W. ALLSOP, Upper Hartshay, Heage, Belper, Derby.
 H. C.—488, 490. C.—487.

Class 476.—British Rhode Island Red Rose Comb Cockerels.

- 494 I. & Special.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 492 II. & 497 III.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 493 R. N.—R. BARKER, Lodge Poultry Farm, 62 High Street, Long Eaton.

Class 477.—British Rhode Island Red Rose Comb Pullets.

- 499 I. & R. N. for Special, & 505 R. N.—GEOFFREY SPENCER, Reedley, Woodgate Park, Bexhill.
 501 II.—G. H. MUZZLEWHITE, Redlands, Tavistock.
 503 III.—ISHERWOOD & Co., Durrant Close, Tenterden.
 504 IV.—F. W. N. GODDARD, Sun Street, Hitchin.
 H. C.—500, 502. C.—507.

Class 478.—Barred Plymouth Rock Cocks.

- 510 I. & 515 II.—W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 518 III.—R. ANTHONY, Home Farm, Euxton, Chorley.
 514 IV.—R. GARLICK, Kirkby Lonsdale.
 519 R. N.—R. CAPE, Black Lake Poultry Farm, Egham.
 H. C.—512. C.—511.

Class 479.—Barred Plymouth Rock Hens.

- 525 I.—R. GARLICK, Kirkby Lonsdale.
 520 II.—E. MARSHALL, Hollyhurst, Lenton, Nottingham.
 521 III. & 528 R. N.—W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 H. C.—522, 524. C.—527.

Class 480.—Barred Plymouth Rock Cockerels.

- 538 I.—R. CAPE, Black Lake Poultry Farm, Egham.
 530 II.—F. S. WILLIAMS, Fordrough Poultry Farm, West Heath, Northfield, Birmingham.
 529 III.—W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 534 IV.—FRED CARDING, Greenlands, Market Drayton.

- 531 V.—R. GARLICK, Kirkby Lonsdale.
 532 R. N.—RICHARD MAJOR, The Cross, Kirkby Lonsdale.
 H. C.—537. C.—539.

Class 481.—Barred Plymouth Rock Pullets.

- 543 I.—JOHN TAYLOR, Heath Farm, Tiptree.
 542 II.—R. GARLICK, Kirkby Lonsdale.
 541 III.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 540 IV.—R. CAPE, Black Lake Poultry Farm, Egham.
 540 R. N.—F. S. WILLIAMS, Fordrough Poultry Farm, West Heath, Northfield, Birmingham.
 H. C.—547, 548. C.—545, 550.

Class 482.—Buff Plymouth Rock Cocks or Cockerels.

- 562 I.—R. ANTHONY, Home Farm, Euxton, Chorley.
 552 II.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 554 III.—JOHN TAYLOR, Heath Farm, Tiptree.
 553 IV.—R. CAPE, Black Lake Poultry Farm, Egham.
 555 V.—FRANK NEAVE, Lingwood, Norwich.
 550 R. N.—H. O. CLARK, Clabury, St. Luke's Avenue, Maidstone.
 H. C.—560, 564. C.—553, 558.

Class 483.—Buff Plymouth Rock Hens or Pullets.

- 567 I.—A. C. TATTERSALL, Watlington, Altrincham.
 573 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 568 III.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 566 IV.—RICHARD MOORE, Hammer House, Sutton Bridge, Wisbech.
 574 R. N.—R. CAPE, Black Lake Poultry Farm, Egham.
 H. C.—565. C.—570, 571.

Class 484.—Plymouth Rock Cocks or Cockerels, any other colour.

- 576 I. & 580 R. N.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 570 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 578 III.—WALTER E. BURRELL, Scarning Poultry Farm, Dereham.
 H. C.—577.

Class 485.—Plymouth Rock Hens or Pullets, any other colour.

- 582 I. & 584 III.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby.
 581 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 583 R. N.—JOHN TAYLOR, Heath Farm, Tiptree.

Class 486.—Old English Game Black-Red Cocks or Cockerels.

- 585 I. & 590 R. N.—TOM WOODCOCK, Burton Fen, Lincoln.
 587 II.—R. S. MARSDEN, Chatburn, Clitheroe.
 585 III.—RICHARD DRAGON, Coronation Cottages, Albert Street, Fleckney, Leicester.
 H. C.—589.

Class 487.—Old English Game Gray or Wheaten Hens or Pullets.

- 591 I.—R. S. MARSDEN, Chatburn, Clitheroe.
 595 II.—J. H. BAKER & SONS, Windyash, Barnstaple.
 594 III.—JOHN WATSON, Eden Mount, Kendal.
 593 R. N.—FRANK FORDARD, 58 Heywood Street, Bury, Lancs.
 H. C.—592.

Class 488.—Old English Game Cocks or Cockerels, any other colour.

- 597 I.—J. R. CROMPTON, Banstead, Surrey.
 605 II. & 590 R. N.—H. B. TURNER, Malverleys, Newbury.
 596 III.—A. J. MAJOR, Ditton, Langley, Bucks.
 H. C.—601. C.—593.

Class 489.—Old English Game Hens or Pullets, any other colour.

- 609 I.—JOHN WATSON, Eden Mount, Kendal.
 616 II.—EDWARD M. ROWELL, Bury, Huntingdon.
 613 III.—R. S. MARSDEN, Chatburn, Clitheroe.
 611 R. N.—E. WELLS, Boundary Bank, Kendal.
 H. C.—620. C.—612.

Class 490.—Indian Game Cocks or Cockerels.

- 625 I, 623 III & 621 IV.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 629 II.—CICIL BRUNT, Clampt, Callington.
 627 R. N.—W. H. CRANE, Roseholm, Hollyfield Road, Sutton Coldfield.
 H. C.—623.

Class 491.—Indian Game Hens or Pullets.

- 631 I.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 636 II.—CECIL BRENT, Clampt, Callington.
 645 III.—FIRTH BROS., Broadway Dairy, Worthing.
 633 R. N.—W. G. BRENT, Warrens Farm, Congdon Shop, Launceston.
 H. C.—630. C.—637.

Class 492.—Minorca Cocks or Cockerels.

- 638 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 639 II.—S. E. PARKER, 466 Blaxwich Road, Leamore, Walsall.

Class 493.—Minorca Hens or Pullets.

- 640 I. & 645 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 646 III.—MRS. R. HAKE, The Glen, Rock Road, Keynsham, Bristol.
 641 IV. & 646 R. N.—ROBERT BRAILEFORD, 38 Coburn Street, Sutton-in-Ashfield.
 H. C.—644.

Class 494.—White Leghorn Cocks or Cockerels.

- 649 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 651 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 650 III.—F. SARSON, The Nook, Asfordby, Melton Mowbray.

Class 495.—White Leghorn Hens or Pullets.

- 652 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 655 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 654 III.—F. SARSON, The Nook, Asfordby, Melton Mowbray.
 653 R. N.—ROBERT FERRIES, Harthill, Countesswells, Aberdeen.

Class 496.—Leghorn Cocks or Cockerels, any other colour.

- 661 I.—R. ANTHONY, Home Farm, Euxton, Chorley.
 659 II.—WILLIAM MANSON, 61 Whitehall, Maybole.
 660 III.—A. W. MCCALLUM, The Bendalls Farm, Milton, Derby.
 656 R. N.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 H. C.—663. C.—658.

Class 497.—Leghorn Hens or Pullets, any other colour.

- 672 I.—R. ANTHONY, Home Farm, Euxton, Chorley.
 667 II.—FRANK BURTON, Tom Thorn, Fairfield, Buxton.
 666 III.—ROBERT FERRIES, Harthill, Countesswells, Aberdeen.
 669 IV.—FRANK STOBELLS, Shakespeare House, Buxton Road, Macclesfield.
 670 R. N.—A. W. MCCALLUM, The Bendalls Farm, Milton, Derby.
 H. C.—674. C.—664.

Class 498.—British Black Leghorn Cocks or Cockerels.

- 677 I. & Special.—ISHERWOOD & Co., Durrant Close, Tenterden.
 679 II. & R. N. for Special.—JOHN M. JOHNSTON, Exbury, Southampton.
 680 III.—W. SOUTHWELL, 4 Skipton Road, Steeton, Keighley.
 676 R. N.—CAPT. NELSON ZAMBRA and C. W. MILNE, West Tisted Manor, Hants.
 H. C.—675.

Class 499.—British Black Leghorn Hens or Pullets.

- 687 I. & Spoon.—J. ROBINSON, 76 Caldry Road, Belvedere.
 688 II. & R. N. for Spoon.—W. SOUTHWELL, 4 Skipton Road, Steeton, Keighley.
 684 III.—CAPT. NELSON ZAMBRA and C. W. MILNE, West Tisted Manor, Hants.
 682 R. N.—MRS. M. B. COWLEY, Thatch Farm, Tubney, Abingdon.
 H. C.—686.

Class 500.—Ancona Cocks or Cockerels.

- 691 I.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 692 II.—H. HARTLEY, Seghole Cottage, Trawden Forest, Colne.
 692 III.—R. ANTHONY, Home Farm, Euxton, Chorley.
 690 R. N.—JOHN HOLMES, Kelstedge, Ashover, Chesterfield.

Class 501.—Ancona Hens or Pullets.

- 699 I. & 696 II.—R. ANTHONY, Home Farm, Euxton, Chorley.
 698 III.—H. HARTLEY, Seghole Cottage, Trawden Forest, Colne.
 695 R. N.—GEORGE GOODALL, Christleton, Chester.
 H. C.—694. C.—697.

Class 502.—Campine Cocks or Cockerels.

- 700 I. & 706 R. N.—T. O. BOWEN, 30 Russell Road, Moseley, Birmingham.
 704 II.—MISS M. E. RAGG, 114 Church Road, Upper Norwood, London, S.E.

- 702 III.—DR. T. ST. CLAIR SMITH, Maritzburg, Chipping Norton.
H. C.—703. C.—705.

Class 503.—*Campine Hens or Pullets.*

- 700 I.—MRS. A. M. PAPE, Shrewton House, Shrewton.
717 II. & 714 III.—MRS. WHITE, Wapshott, Staines.
712 R. N.—W. A. SLOOOCK, Red Lodge, Kingfield, Woking.
H. C.—713. C.—711.

Class 504.—*Bresse Cocks or Cockerels.*

- 720 I.—MRS. A. M. PAPE, Shrewton House, Shrewton.
725 II. & 723 III.—ERNEST STEVENS, 55 The Oval, Godalming.
718 R. N.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames.
H. C.—719. C.—726.

Class 505.—*Bresse Hens or Pullets.*

- 727 I.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames.
729 II. & 733 III.—MRS. A. M. PAPE, Shrewton House, Shrewton.
730 R. N.—CAPT. NELSON ZAMBRA and C. W. MILNE, West Tisted Manor, Hants.
H. C.—735. C.—732.

Class 506.—*Sicilian Buttercup Cocks or Cockerels.*

- 741 I. & 738 II.—FRANK E. DERHAM, The Old Hall, Hilton, Derby.
740 III.—RICHARD TERROT, Burchetts Green, Maidenhead.
742 R. N.—MISS DOROTHY G. SUTTON, Grundisburgh Rectory, Woodbridge.
H. C.—739.

Class 507.—*Sicilian Buttercup Hens or Pullets.*

- 743 I. & 746 R. N.—FRANK E. DERHAM, The Old Hall, Hilton, Derby.
745 II.—MISS DOROTHY G. SUTTON, Grundisburgh Rectory, Woodbridge.
744 III.—ERNEST STEVENS, 55 The Oval, Godalming.

Class 508.—*Cocks, any other distinct variety, Bantams excepted.*

- 764 I.—R. ANTHONY, Home Farm, Euxton, Chorley, Hamburgh.
762 II.—JOHN CARSWELL, 148 Grahams Road, Falkirk, Scots Grey.
765 III.—HARRY FORTUNE, Banklands, Siladen, Kelghley, Black Hamburgh.
767 R. N.—DR. T. W. E. ROYDEN, Flegg Burgh, Norfolk. Black Sumatra Game.
H. C.—768. C.—761.

Class 509.—*Cockerels, any other distinct variety, Bantams excepted.*

- 765 I.—LAWRENCE ARDERN, Grove, Landulph, Hatt, Malay.
767 II.—MAJOR G. T. WILLIAMS, Tredrea, Perranwell, Polish.
769 III.—THOMAS HOYLE, Savile Royd, Halifax. Black Hamburgh.
771 R. N.—MAJOR G. T. WILLIAMS.

Class 510.—*Hens, any other distinct variety, Bantams excepted.*

- 777 I.—R. ANTHONY, Home Farm, Euxton, Chorley, Hamburgh.
776 II.—A. J. MAJOR, Ditton, Langley, Bucks. Scots Dumble.
774 III.—LAWRENCE ARDERN, Grove, Landulph, Hatt. Jubilee Indian Game.
782 R. N.—THOMAS HOYLE, Savile Royd, Halifax. Black Hamburgh.
H. C.—779. C.—787.

Class 511.—*Pullets, any other distinct variety, Bantams excepted.*

- 790 I.—MAJOR G. T. WILLIAMS, Tredrea, Perranwell, Frizzle.
791 II.—W. W. W. BUTT, Eastfield Poultry Farm, North Thoresby, Salmon Faverolle.
792 III.—LAWRENCE ARDERN, Grove, Landulph, Hatt. Jubilee Indian Game.
794 R. N.—MAJOR G. T. WILLIAMS.
H. C.—793.

Class 512.—*Utility Poultry. White Wyandotte Cocks or Cockerels.*

- 795 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
804 II.—W. COOK & SONS, St. Mary Cray.
805 III. & 800 R. N.—S. V. PLAYLE, Gorse Hill Poultry Farm, Mapperley Plains, Nottingham.
806 IV.—BLACK LAKE POULTRY FARM, Egham.
H. C.—802, 803. C.—796, 801.

Class 513.—*Utility Poultry. White Wyandotte Hens or Pullets.*

- 808 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
817 II.—C. N. GOODE, The Croft, Bedford Road, Rushden, Northants.
827 III.—HUGH GUNN, Castle Villa Poultry Farm, Gloucester.
828 IV.—J. W. BROUGHTON, The Crest Poultry Farm, Dalton, Thirsk.

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- 824 V.—TOM SCOTT, 2 Horsden View, Wooler.
 810 R. N.—F. SHADWELL CLERKE, Overhill Stock Poultry Farm, Wolverley, Kidderminster.
 H. C.—812, 813. C.—821.

Class 514.—Utility Poultry. *White Leghorn Cocks or Cockerels.*

- 829 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 836 II.—JOE FARNSWORTH, Mount Pleasant Poultry Farm, Bleasby, Nottingham.
 838 III.—NORMAN READMAN, Manor Poultry Farm, Gribthorpe, Howden.
 835 IV.—BLACK LAKE POULTRY FARM, Egham.
 832 R. N.—J. N. CHAWORTH-MUSTERS, Annesley Park, Notts.
 H. C.—830. C.—831.

Class 515.—Utility Poultry. *White Leghorn Hens or Pullets.*

- 840 I.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 851 II.—H. H. UNDERWOOD, Rosedale, Papplewick Lane, Linby, Notts.
 845 III.—MRS. HEBER PERCY, Hodnet Hall Poultry Farm, Hodnet.
 844 IV.—AUSTEN WALKER, Whitehall, Morton-cum-Fiskerton, Notts.
 850 V.—JAMES ATHERTON, Brooklyn, Clive, Middlewich.
 852 R. N.—BLACK LAKE POULTRY FARM, Egham.
 H. C.—839, 846. C.—849.

Class 516.—Utility Poultry. *British Rhode Island Red Cocks or Cockerels.*

- 854 I.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 859 II.—MISS W. B. YOUNG, 1 Oxford Street, Woodstock.
 857 III. & 860 R. N.—A. L. TAYLOR, The Cottage, Nuthall, Nottingham.
 H. C.—858. C.—853.

Class 517.—Utility Poultry. *British Rhode Island Red Hens or Pullets.*

- 862 I.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 876 II.—J. H. BAKER & SONS, Windyash, Barnstaple.
 871 III.—L. FLETCHER, Glen Holt, Gilton, Newark.
 866 IV.—RICHARD MOORE, Hammer House, Sutton Bridge, Wisbech.
 870 V.—MISS M. V. LARKWORTHY, Cooper's Bridge, Bramshott, Liphook.
 874 R. N.—MRS. EDWIN ROBSON, Sutton House, Sutton, Hull.
 H. C.—861, 865. C.—869.

Class 518.—Utility Poultry. *Sussex Cocks or Cockerels, any colour.*

- 882 I. & 886 V.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 878 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 879 III.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 881 IV.—J. S. WORSLEY, The Cottage, Thornaby Village, Yorks.
 890 R. N.—HUGH GUNN, Castle Villa Poultry Farm, Gloucester.
 H. C.—885. C.—877.

Class 519.—Utility Poultry. *Sussex Hens or Pullets, any colour.*

- 894 I.—ISHERWOOD & Co., Durtant Close, Tenterden.
 898 II.—LAWRENCE ARDERN, Grove, Landulph, Hatt.
 892 III.—LORD DEWAR, Homestall Poultry Farm, East Grinstead.
 891 IV.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames.
 908 V.—MRS. M. A. GRANT, Kirby Hall, Horton Kirby, Kent.
 H. C.—899, 901, 902. C.—903.

Class 520.—Utility Poultry. *Cocks or Cockerels, any other variety.*

- 920 I.—R. ANTHONY, Home Farm, Euxton, Chorley. Buff Plymouth Rock.
 923 II.—MRS. M. MUGELI, Marsden House, High Lane, Stockport. Houdan.
 917 III.—AUSTEN WALKER, Whitehall, Morton-cum-Fiskerton, Notts. Ancona.
 914 IV.—F. SHADWELL CLERKE, Overhill Stock Poultry Farm, Wolverley, Kidderminster.
 Barnevelder.
 913 R. N.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames, Australorp.
 H. C.—918, 919. C.—921, 922.

Class 521.—Utility Poultry. *Hens or Pullets, any other variety.*

- 944 I.—R. ANTHONY, Home Farm, Euxton, Chorley. Ancona.
 924 II.—LORD DEWAR, Homestall Poultry Farm, East Grinstead. Minorca.
 927 III.—LAWRENCE ARDERN, Grove, Landulph, Hatt. Black Leghorn.
 929 IV.—LADY BURKE, Henley Pedigree Utility Poultry Farm, Henley-on-Thames. Australorp.
 937 V.—MRS. H. E. BRANSTON, The Old Hall, Balderton, Newark. Black Minorca.
 936 R. N.—JOHN M. JOHNSTON, Exbury, Southampton. Black Leghorn.
 H. C.—942. C.—941.

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Class 522.—Aylesbury Drakes or Ducks.

- 947 I.—R. ANTHONY, Home Farm, Buxton, Chorley.
948 II.—J. Y. WHATELEY, Prospect House, Appleton Roebuck, York.
949 III.—LADY ROBINSON, Workshop Manor, Workshop.

Class 523.—Rouen Drakes or Ducks.

- 949 I. & 951 II.—R. ANTHONY, Home Farm, Buxton, Chorley.
948 III.—RALPH ALTY, Gravel Farm, Croston, Preston.
950 E. N.—LT.-COL. G. R. B. PATTEN, Glan Hafod, Old Colwyn.

Class 524.—Fawn Indian Runner Drakes or Ducks, bred prior to 1928.

- 980 I. & Special, & 955 IV.—THE REV. J. HEWETSON, Burbage Vicarage, Buxton.
959 II. & Special.—R. ANTHONY, Home Farm, Buxton, Chorley.
964 III.—RALPH ALTY, Gravel Farm, Croston, Preston.
956 V.—R. S. MARSDEN, Chatburn, Clitheroe.
958 E. N.—CAPT. G. C. CREE, Overmoline, Dorchester.
H. C.—963. C.—962.

Class 525.—Fawn Indian Runner Drakes or Ducks, bred in 1928.

- 973 I.—CAPT. G. C. CREE, Overmoline, Dorchester.
969 II.—MISSES DAVIDSON and CHISHOLM, Cantray, Croy, Gollanfield.
970 III.—JAMES P. BLEAZARD, New Close Farm, Downham, Clitheroe.
H. C.—972. C.—968.

Class 526.—White Indian Runner Drakes or Ducks, bred prior to 1928.

- 975 I. & E. N. for Special, & 980 II. & E. N. for Special.—H. WHITLEY, Primley, Paignton.
983 III.—W. J. HEWITT, Littlethorpe, Ripon.
979 IV.—W. JONES, Unicorn House, Middleton Road, Oswestry.
H. C.—981. C.—976.

Class 527.—White Indian Runner Drakes or Ducks, bred in 1928.

- 984 I.—H. WHITLEY, Primley, Paignton.
985 II. & 988 III.—REGINALD APPELYARD, Ixworth, Bury St. Edmunds.
986 E. N.—THE REV. J. HEWETSON, Burbage Vicarage, Buxton.
H. C.—987.

Class 528.—Indian Runner Drakes or Ducks, any other colour, bred prior to 1928.

- 989 I. & 991 II.—REGINALD APPELYARD, Ixworth, Bury St. Edmunds.

Class 529.—Indian Runner Drakes or Ducks, any other colour, bred in 1928.

[No exhibit.]

Class 530.—Buff Orpington Drakes or Ducks, bred prior to 1928.

- 996 I.—COL. R. S. WILLIAMSON, The Grange, Rawnsley, Stafford.
995 II. & 999 E. N.—LT.-COL. E. C. ATKINS, Stretton House, Hinckley.
998 III.—JOHN M. JOHNSTON, Exbury, Southampton.
H. C.—997.

Class 531.—Buff Orpington Drakes or Ducks, bred in 1928.

- 1001 I.—G. F. GRIFFITHS, Snail Mill, Totnes.
1000 II.—LT.-COL. G. R. B. PATTEN, Glan Hafod, Old Colwyn.

Class 532.—Drakes, any other variety.

- 1008 I.—COL. R. S. WILLIAMSON, The Grange, Rawnsley, Stafford. Khaki Campbell.
1010 II.—G. CLAPHAM, Bowbrook, Shrewsbury. Muscovy.
1006 III.—R. BARKER, Lodge Poultry Farm, 62 High Street, Long Eaton. Magpie.
1007 IV.—JOHN H. BUTLER, Gatecombe Farm, Flax Bourton, Bristol. Khaki Campbell.
1004 E. N.—A. J. MAJOR, Ditton, Langley, Bucks. Muscovy.
H. C.—1003. C.—1005.

Class 533.—Ducks, any other variety.

- 1018 I.—COL. R. S. WILLIAMSON, The Grange, Rawnsley, Stafford. Khaki Campbell.
1015 II.—R. BARKER, Lodge Poultry Farm, 62 High Street, Long Eaton. Magpie.
1014 III.—G. CLAPHAM, Bowbrook, Shrewsbury. Muscovy.
1018 E. N.—JOHN H. BUTLER, Gatecombe Farm, Flax Bourton, Bristol. Khaki Campbell.
H. C.—1012.

Class 534.—Emden Ganders or Geese.

- 1018 I.—R. D. IVES, The Grange, Erpingham, Norwich.
1021 II.—REGINALD APPELYARD, Ixworth, Bury St. Edmunds.

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- 1010 **III.**—BROGYNTYN ESTATE Co., Brogyntyn Home Farm, Oswestry.
 1020 **R. N.**—J. Y. WHEATLEY, Prospect House, Appleton Roebuck, York.
H. C.—1017.

Class 535.—Toulouse Ganders or Geese.

- 1023 **I.**—J. Y. WHEATLEY, Prospect House, Appleton Roebuck, York.
 1022 **II.**—H. WHITLEY, Primley, Paignton.

Class 536.—Turkey Cocks.

- 1029 **I.**—R. D. IVES, The Grange, Erpingham, Norwich.
 1028 **II.**—REGINALD APPEYARD, Ixworth, Bury St. Edmunds.
 1026 **III.**—H. WHITLEY, Primley, Paignton.
 1024 **R. N.**—BROGYNTYN ESTATE Co., Brogyntyn Home Farm, Oswestry.
H. C.—1030.

Class 537.—Turkey Hens.

- 1036 **I.** & 1032 **R. N.**—R. D. IVES, The Grange, Erpingham, Norwich.
 1035 **II.**—HUBERT PARTRIDGE, Park Farm, Rousham, Steeple Aston, Oxon.
 1033 **III.**—REGINALD APPEYARD, Ixworth, Bury St. Edmunds.
H. C.—1034.

FLOWER SHOW.

Class 1.—Groups of Miscellaneous Plants.

- 1 **I.** (245.)—JAMES CYPHER & SONS, Cheltenham.
 2 **II.** (240.)—W. A. HOLMES, West End Nurseries, Chesterfield.

Class 2.—Twenty-four Bunches of *Gladiolus Primulinus*. [No Award.]

Class 3.—Collections of *Delphiniums*.

- 4 **I.** (26.)—BEES, LTD., Sealand Nurseries, Chester.
 5 **II.** (25.)—HEWITT & Co., LTD., Solihull, Warwickshire.

Class 4.—Groups of *Tuberous Begonias* in pots.

- 8 **I.** (230.)—BLACKMORE & LANGTON, Twerton-on-Avon, Bath.

Class 5.—Groups of *Aquatic Plants*.

- 9 **I.** (215.)—BOWELL & SKARRATT, Cheltenham.
 10 **II.** (210.)—WILLIAM WOOD & SONS, LTD., Taplow, Bucks.

Class 6.—Collections of *Hardy Perennial Plants and Out Blooms*.

- 11 **I.** (230.)—BEES, LTD., Sealand Nurseries, Chester.
 13 **II.** (225.)—WILLIAM ARTINDALE & SON, Nether Green, Sheffield.
 12 **III.** (220.)—MAURICE PRITCHARD & SONS, Christchurch, Hants.
 15 **IV.** (215.)—HARKNESS & SONS, Bedale, Yorks.
 14 **V.** (210.)—WILLIAM SYDENHAM, Gayborden Nurseries, Melbourne, Derbyshire.

Class 7.—Best Representations of *Hardy Perennial Borders*.

- 16 **I.** (225.)—WILLIAM ARTINDALE & SON, Nether Green, Sheffield.

Class 8.—Collections of *Out Sprays of Tree Carnations*.

- 17 **I.** (215.)—C. ENGLMANN, LTD., Saffron Walden.
 18 **II.** (210.)—STUART LOW & Co., Bush Hill Park, Enfield.

Class 9.—Collections of *Out Sprays of Border Carnations*.

- 19 **I.** (215.)—H. LAKEMAN, Queensberry Nursery, Thornton Heath.

Class 10.—Collections of *Sweet Peas*.

- 22 **I.** (215.)—R. BOLTON & SON, Birdbrook, Halstead.
 20 **II.** (210.)—J. STEVENSON, Nurseries, Wimborne.
 23 **III.** (205.)—JOHN WILSON, 46 Mansfield Road, near Mansfield.

Class 11.—Collections of *Out Roses*.

- 26 **I.** (215.)—FRANK CANT & Co., LTD., Brailsford Rose Nurseries, Colchester.

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Large Gold Medals to:—

ALLWOOD BROS., Wivelsfield Nurseries, Haywards Heath. Carnations.
 ALEXANDER DICKSON & SONS, Howlmark, Newtownards. Sweet Peas.
 KING'S ACRE NURSERIES, LTD., Hereford. Orchard House Trees in Pots.
 THOMAS ROBINSON, Porchester Nurseries, Nottingham. Roses and Alpines.
 STUDLEY COLLEGE, Studley, Warwickshire. Collection of Fruit.
 SUTTON & SONS, Reading. Collection of Sweet Peas.
 WATERER SONS & CRISP, LTD., Nurseries, Twyford, Berks. Collection of Shrubs and Conifers.
 WALLACE & Co., LTD., Tunbridge Wells. Ornamental Garden.

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ERRATUM.

JOURNAL, Vol. 88, 1927, Appendix, page cxlviii. In Class 398, the Second Prize should be:—

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These privileges are applicable only when the Analyses are for *bond fide* agricultural purposes, and are required by Members of the Society for their own use and guidance in respect of farms or land in their own occupation and within the United Kingdom.

The Analyses are given on the understanding that they are required for the individual and sole benefit of the Member applying for them, and must not be used for other persons, or for commercial purposes.

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	£	s.	d.
1.—An opinion on the purity of any Fertiliser or Feeding Stuff (so far as this can be given without detailed analysis)	1	0	
2.—Determination of any <i>one</i> ordinary constituent in a Fertiliser or Feeding Stuff	2	6	
3.—Determination of Potash	5	0	
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Instructions for Selecting and Sending Samples for Analysis.

GENERAL RULES.—(1) A sample taken for analysis should be fairly *representative* of the *bulk* from which it has been drawn.—(2) The sample should reach the Analyst in the *same condition* that it was in at the time when drawn.

When **Fertilisers** are delivered in bags, select four or five of these from the bulk, and either turn them out on a floor and rapidly mix their contents, or else drive a shovel into each bag and draw out from as near the centre as possible a couple of shovelfuls of the manure, and mix these quickly on a floor.

Halve the heap obtained in either of these ways, take one-half (rejecting the other) and mix again rapidly, flattening down with the shovel any lumps that appear. Repeat this operation until at last only some three or four pounds are left.

From this fill three tins, holding from $\frac{1}{2}$ lb. to 1 lb. each, mark, fasten up and seal each of these. Send one for analysis, and retain the others for reference.

Or.—the manure may be put into glass bottles provided with well-fitting corks; the bottles should be labelled and the corks sealed down. The sample sent for analysis can be packed in a wooden box and sent by post or rail.

When manures are delivered in bulk, portions should be successively drawn from *different parts* of the bulk, the heap being turned over now and again. The portions drawn should be thoroughly mixed, subdivided, and, finally, samples should be taken as before, except that when the manure is coarse and bulky it is advisable to send larger samples than when it is in a finely divided condition.

Linseed, Cotton, and other Feeding Cakes.—If a single cake be taken, three strips should be broken off right across the cake, and from the middle portion of it, one piece to be sent for analysis, and the other two retained for reference. Each of the three pieces should be marked, wrapped in paper, fastened up, and sealed. The piece forwarded for analysis can be sent by post or rail.

A more satisfactory plan is to select four to six cakes from different parts of the delivery, then break off a piece about four inches wide from the middle of each cake, and pass these pieces through a cake-breaker. The broken cake should then be well mixed and three samples of about 1 lb. each should be taken and kept in tins or bags, duly marked, fastened, and sealed as before. One of these lots should be sent for analysis, the remaining two being kept for reference. It is advisable also with the broken pieces to send a small strip from an unbroken cake.

Feeding Meals, Grain, &c.—Handfuls should be drawn from the centre of half a dozen different bags of the delivery; these lots should then be well mixed, and three $\frac{1}{2}$ -lb. tins or bags filled from the heap, each being marked, fastened up, and sealed. One sample is to be forwarded for analysis and the others retained for reference.

Soils.—Have a wooden box made 6 inches in length and width, and from 9 to 12 inches deep, according to the depth of soil and subsoil of the field. Mark out in the field a space of about 12 inches square; dig round in a slanting direction a trench, so as to leave undisturbed a block of soil and its subsoil 9 to 12 inches deep; trim this block to make it to fit into the wooden box, invert the open box over it, press down firmly, then pass a spade under the box and lift it up, slowly turn over the box, nail on the lid, and send by rail. The soil will then be received in the position in which it is found in the field.

In the case of very light, sandy, and porous soils, the wooden box may be at once inverted over the soil, forced down by pressure, and then dug out.

Waters.—Samples of water are best sent in glass-stoppered Winchester bottles, holding half a gallon. One such bottle is sufficient for a single sample. Care should be taken to have these scrupulously clean. In taking a sample of water for analysis it is advisable to reject the first portion drawn or pumped, so as to obtain a sample of the water when in ordinary flow. The bottle should be rinsed out with the water that is to be analysed, and it should be filled nearly to the top. The stopper should be secured with string, or be tied over with linen or soft leather. The sample can then be sent carefully packed either in a wooden box with sawdust, &c., or in a hamper with straw.

Milk.—A pint bottle should be sent in a wooden box.

GENERAL INSTRUCTIONS. Time for Taking Samples.—All samples, both of fertilisers and feeding stuffs, should be taken as soon after their delivery as possible, and should reach the Analyst within *ten days* after delivery of the article. In every case it is advisable that the Analyst's certificate be received before a fertiliser is sown or a feeding stuff is given to stock.

Procedure in the Event of the Vendor wishing Fresh Samples to be Drawn.—Should a purchaser find that the Analyst's certificate shows a fertiliser or feeding stuff not to come up to the guarantee given him, he may inform the vendor of the result and complain accordingly. He should then send to the vendor one of the two samples which he has kept for reference. If, however, the vendor should demand that a fresh sample be drawn, the purchaser must allow this, and also give the vendor an opportunity of being present, either in person or through a representative whom he may appoint. In that case three samples should be taken in the presence of both parties with the same precautions as before described, each of which should be duly packed up, labelled and sealed by both parties. One of these is to be given to the vendor, one is to be sent to the Analyst, and the third is to be kept by the purchaser for reference or future analysis if necessary.

Suggestions to Purchasers of Fertilisers and Feeding Stuffs.

Purchasers are recommended in all cases to insist on having an **INVOICE**, and to see that such invoice contains the following particulars:—

In the case of Fertilisers:—

- (1) The name of the Fertiliser.
- (2) Whether the Fertiliser is artificially compounded or not.
- (3) The minimum analysis of the Fertiliser in respect of its principal fertilising ingredients.

In the case of artificially prepared Feeding Stuffs for Cattle:—

- (1) The name of the article.
- (2) The description of the article—whether it has been prepared (a) from one substance or seed, or (b) from more than one substance or seed.
- (3) The percentages of oil and albuminoids guaranteed.

For example:

- (a) An invoice describing an article as "Linseed Cake" implies a warranty that the article is pure, i.e., is prepared from linseed only: "Cotton Cake" (whether decorticated or undecorticated), and "Rape Cake" (for feeding purposes), would come under a similar category.

Purchasers are reminded that the use of such terms as "95 per cent.," "Oil Cake," etc., affords no security against adulteration.

- (b) In the case of a Compound Cake or Feeding Stuff, a Vendor is compelled by the Fertilisers and Feeding Stuffs Act of 1906 to state the percentages of oil and albuminoids guaranteed, and that it is prepared from more than one substance, but he is not required to specify the particular materials used in its preparation. Purchasers are recommended therefore to buy Mixed Feeding Cakes, Meals, etc., with a guaranteed analysis. Any statements in the invoice as to the component parts of such Mixed Cake or Meal will take effect as a warranty, as also will any statements in an invoice, circular, or advertisement as to the percentages of nutritive and other ingredients in any article sold for use as food for cattle.

Members of the Society are strongly recommended not only to see that the invoices given to them accurately describe the goods they have ordered, but to make all their orders *subject to the Analysis and Report of the Consulting Chemist of the Royal Agricultural Society of England.*

Attention is particularly directed to the recommendations below as to the qualities of Fertilisers and Feeding Stuffs which purchasers should demand.

Conditions of Purchase and Sale.

FERTILISERS.

Raw Bones, Bone-meal, or Bone-dust to be guaranteed "**PURE**," and to contain not less than 45 per cent. of Phosphate of Lime, and not less than 4 per cent. of Ammonia.

Steamed or "Degelatinized" Bones to be guaranteed "**PURE**" and to contain not less than 55 per cent. of Phosphate of Lime, and not less than 1 per cent. of Ammonia.

Mineral Superphosphate of Lime to be guaranteed to contain a certain percentage of "Soluble Phosphate." [From 25 to 28 per cent. of Soluble Phosphate is an ordinarily good quality.]

Dissolved Bones to be guaranteed to be "made from raw bone and acid only," and to be sold as containing stated minimum percentages of Soluble Phosphate, Insoluble Phosphate, and Ammonia.

Compound Artificial Manures, Bone Manures, Bone Compounds, etc., to be sold by analysis stating the minimum percentages of Soluble Phosphate, Insoluble Phosphate, and Ammonia contained.

Basic Slag to be guaranteed to contain a certain percentage of Total phosphates or of "Citric soluble" phosphates (i.e., phosphates soluble in a 2 per cent. citric acid solution), and to be sufficiently finely ground that at least 80 per cent. will pass through a "standard" sieve (10,000 meshes to the square inch).

The highest grades of Basic Slag range from 38 to 42 per cent., medium grades from 30 to 35 per cent., and low grades from 21 to 25 per cent. of Total phosphates.

Generally speaking, at least 80 per cent. of the Total phosphates in a Basic Slag are soluble in the citric acid solution above mentioned. Accordingly, a high grade Basic Slag would contain from 30 to 34 per cent., a medium grade from 24 to 25 per cent., and a low grade from 17 to 21 per cent. of "citric soluble" phosphates.

Peruvian Guano to be described by that name, and to be sold by analysis stating the minimum percentages of Phosphates and Ammonia.

Sulphate of Ammonia to be guaranteed "**PURE**," and to contain not less than 24 per cent. of Ammonia.

Nitrate of Soda to be guaranteed "**PURE**," and to contain 95 per cent. of Nitrate of Soda.

Kainit to be guaranteed to contain 23 per cent. of Sulphate of Potash.

All Fertilisers to be delivered in good and suitable condition for sowing.

FEEDING STUFFS.

Linseed Cake, Cotton Cake (Decorticated and Undecorticated), and Rape Cake (for feeding purposes) to be pure, i.e., prepared *only* from the one kind of seed from which their name is derived; and to be in sound condition. The percentages of oil and albuminoids guaranteed must also be stated. The Report of the Consulting Chemist of the Royal Agricultural Society of England to be conclusive as to the "purity" or otherwise of any feeding stuffs.

Mixed Feeding Cakes, Meals, etc., to be sold on a guaranteed analysis, giving the percentages of oil and albuminoids, to be sound in condition, and to contain nothing of an injurious nature, or ingredients that are worthless for feeding purposes.

MEMBERS' BOTANICAL PRIVILEGES.

THE COUNCIL HAVE FIXED THE FOLLOWING RATES OF CHARGES FOR THE EXAMINATION OF PLANTS AND SEEDS

BY THE SOCIETY'S BOTANIST.

Analyses are given on the understanding that they are required for the individual and sole benefit of the Member applying for them, and must not be used for other persons or for commercial purposes. The Analyses and Reports may not be communicated to the vendor except in cases of dispute.

The charge for examination must be paid at the time of application, and the carriage of all parcels must be prepaid. When, however, *bond fide* inquiries require no special investigation the fees will be returned with the reply.

- 1.—Report on the purity and germinating capacity of samples of agricultural seeds, with a statement as to the nature and amount of the impurities or adulterants present . 1s.
- 2.—Report on the constitution of mixtures of grass seeds and an opinion as to their suitability for temporary leys, permanent pastures, &c. 1s.
- 3.—Identification of weeds and poisonous plants with suggestions for their eradication 1s.
- 4.—Report on the fungoid diseases affecting farm crops, with an account of the methods suitable for their treatment, where known 1s.
- 5.—Report on the natural herbage of a district as a guide to the formation of permanent pastures 1s.
- 6.—Report on the suitability or otherwise of the different varieties of the chief farm crops for local conditions (where the information is available), stating their average cropping capacity as compared with other varieties, their quality, power of resistance to various diseases, and general purity to type 1s.
- 7.—Reports on any other matters of a botanical nature of interest to agriculturists 1s.

PURCHASE OF SEEDS.

The purchaser should obtain from the vendor, by invoice or other writing, the proper designation of the seeds he buys, with a guarantee of the percentage of purity and germination, and of its freedom from ergot, and, in the case of clover, from the seeds of dodder.

MEMBERS' BOTANICAL PRIVILEGES (*continued*).

THE SAMPLING OF SEEDS.

The utmost care should be taken to secure a fair and honest sample. This should be drawn from the bulk delivered to the purchaser, and not from the sample sent by the vendor.

When legal evidence is required, the sample should be taken from the bulk, and placed in a sealed bag in the presence of a witness. Care should be taken that the sample and bulk be not tampered with after delivery, or mixed or brought in contact with any other sample or bulk.

At least one ounce of grass and other small seeds should be sent, and two ounces of cereals and the larger seeds. When the bulk is obviously impure, the sample should be at least double the amount specified. Grass seeds should be sent at least four weeks, and seeds of clover and cereals two weeks before they are to be used.

The exact name under which the sample has been sold and analysed should accompany it.

REPORTING THE RESULTS.

The Report will be made on a schedule in which the nature and amount of impurities will be stated, and the number of days each sample has been under test, with the percentage of the seeds which have germinated.

"Hard" clover seeds, though not germinating within the time stated, will be considered good seeds, and their percentage separately stated.

The impurities in the sample, including the chaff of the species tested, will be specified in the schedule, and only the percentage of the pure seed of that species will be reported upon; but the **REAL VALUE** of the sample will be stated. The Real Value is the combined percentages of purity and germination, and is obtained by multiplying these percentages and dividing by 100; thus in a sample of Meadow Fescue having 88 per cent. purity and 95 per cent. germination, 88 multiplied by 95 gives 8,360, and this divided by 100 gives 83.6, the Real Value.

SELECTING SPECIMENS OF PLANTS.

When a specimen is sent for determination, the whole plant should be taken up and the earth shaken from the roots. If possible, the plants must be in flower or fruit. They should be packed in a light box, or in a firm paper parcel.

Specimens of diseased plants or of parasites should be forwarded as fresh as possible. They should be placed in a bottle, or packed in tinfoil or oil-silk.

All specimens should be accompanied with a letter specifying the nature of the information required, and stating any local circumstances (soil, situation, etc.) which, in the opinion of the sender, would be likely to throw light on the inquiry.

PARCELS OR LETTERS CONTAINING SEEDS OR PLANTS FOR EXAMINATION MUST BE ADDRESSED (CARRIAGE OR POSTAGE PREPAID) TO—

PROFESSOR SIR R. H. BIFFEN, F.R.S.,
School of Agriculture, Cambridge.

MEMBERS' ZOOLOGICAL PRIVILEGES.

The Council have fixed the charge of 1s. for information to be supplied, by the Society's Zoologist, respecting any injurious (animal, quadruped, bird, insect, worm, &c.) pests.

(1) FARM CROPS.

All the ordinary farm crops are subject to numerous pests, some attacking the roots, some the leaves, others the stem or the blossom. The first necessity is the accurate identification of the pest in any case, for a knowledge of its life-history often suggests a method of dealing with it.

(2) FRUIT TREES.

There are a great number of orchard and bush-fruit pests. Some (codlin moth, pear-midge, &c.) attack the fruit; others (red-spider, aphid, caterpillars, &c.) the leaves; others (woolly aphid, boring beetles, &c.) the stem. Information will be given as to the identity of any pest and the best way of combating it.

(3) FOREST TREES.

Advice will be given with regard to the treatment of forest-tree pests, in plantations, nursery gardens, or ornamental grounds. Such pests may attack the trunks (beech-scale, boring insects, &c.), the leaves (caterpillars, aphid, &c.), or the roots (cockchafer grubs, &c., in young plantations).

(4) DOMESTICATED ANIMALS.

Animal parasites, whether external or internal, may be sent for identification and advice. They include worms, fly-maggots, ticks, lice, &c., and many well-known diseases (warbles, gapes, &c.) are due to them.

Diseases of animals due to other causes should be referred to the Veterinary Department.

N.B.—It is very important that specimens should reach the Zoologist fresh and in good condition. It is often impossible to determine the cause of injury in the case of crushed and shrivelled material. Tin boxes should be used, and some damp blotting-paper inserted to prevent undue drying. In the case of root-pests, the root should be sent with its surrounding soil.

PARCELS OR LETTERS CONTAINING SPECIMENS (CARRIAGE OR POSTAGE PAID) MUST BE ADDRESSED TO—

Mr. CECIL WARBURTON, M.A.,
School of Agriculture, Cambridge.

MILK AND DAIRY PRIVILEGES.

The Society makes an annual grant to the Research Institute in Dairying, Reading University, that its members may obtain advice on questions concerning the production and distribution of milk and the preparation of dairy products. The investigation of the causes of taints or other faults occurring in milk, butter, cheese or other milk products is undertaken. No fee is charged unless exceptional circumstances arise. Inquiries should be addressed to The Director, Research Institute in Dairying, The University, Reading.

MEMBERS' VETERINARY PRIVILEGES.

In order to enable Members to obtain the highest possible Veterinary advice when the necessity arises, the Society has entered into an agreement with the Royal Veterinary College, under which diseased animals may be admitted to the College Infirmary for treatment, and the Professors of the College may be consulted or called upon to investigate outbreaks of disease at greatly reduced fees.

I.—ADMISSION OF SICK OR DISEASED ANIMALS TO THE ROYAL VETERINARY COLLEGE.

Members of the Society have all the privileges of subscribers to the Royal Veterinary College, Camden Town, N.W.1, so far as the admission for treatment of Cattle, Sheep, and Swine is concerned, without being called upon to pay the annual subscription to the College of two guineas. The charges made by the College for keep and treatment are as follows:—Cattle, 10s. 6d., and Sheep and Pigs, 3s. 6d. per week for each animal.

The full privileges of subscribers, including the examination of horses, and the admission of horses and dogs into the College Infirmary for surgical or medical treatment, on payment of the cost of keep, will be accorded to Members of the Society on payment of a subscription to the College of one guinea instead of two guineas per annum.

II.—FEES FOR CONSULTATIONS, ANALYSES, AND EXAMINATIONS AT THE ROYAL VETERINARY COLLEGE.

The following fees are payable by Members of the Society for services performed at the Royal Veterinary College on their behalf in cases where a visit to the locality is not involved:—

	£	s.	d.
Personal consultation with a Veterinary Professor	10	6	
Consultation by letter.	10	6	
Post-mortem examination of an animal and report thereon	1	1	0
Chemical Examination of viscera for any specified metallic poison	10	6	
Chemical Examination of viscera for metallic poisons	1	0	0
Chemical Examination of viscera for vegetable poisons	1	0	0
Chemical Examination of viscera complete, for metals and alkaloids	2	0	0

(The above fees do not apply to cases which involve a visit to the locality.)

III.—INVESTIGATION OF OUTBREAKS OF DISEASE AMONG FARM STOCK.

In the event of any obscure outbreak of disease among Cattle, Sheep, or Swine occurring on the farm of any Member of the Society, application should at once be made to the PRINCIPAL of the ROYAL VETERINARY COLLEGE, CAMDEN TOWN, LONDON, N.W.1.

The Principal will then instruct an officer of the College to inquire into the outbreak and report to him. He will also fix the amount of remuneration to be paid to the Inspector, whose professional fee will in no case exceed two guineas per day, exclusive of the actual cost of travelling and maintenance.

When it appears, on the report of the Inspector selected, that the outbreak was of an important character or of general interest, the cost of the investigation will be defrayed by the Royal Veterinary College.

LIBRARY.

The Society's Library has been rearranged and a printed Catalogue prepared of the Agricultural and other works which it contains. This Catalogue can be purchased by Members at the Society's House, price 17/6 per copy.

A Librarian has been appointed, and the following regulations have been made by the Council :—

1. The Library is open every week day from 10 till 4, except on Saturdays, and on those days when the Council and Committees are meeting.

2. Governors and Members are entitled to take out books, upon paying the carriage of the same and all expenses from the time of issue to the time of return. Books of reference and selected books will not be issued.

3. One month is allowed for the perusal of books.

4. Governors and Members shall be liable to pay the full price of any books borrowed by them which may be lost or damaged during the interval between their issue and return.

PUBLICATIONS OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

JOURNAL OF THE SOCIETY.

Now published as an Annual Volume of about 650 pages, in paper covers. Free to Members
Price to Non-Members, Fifteen Shillings.

AGRICULTURAL RESEARCH.

An annual publication prepared under the authority of the Research Committee of the R.A.S.E. Council. About 200 pages. Free to Members on application; Price to Non-Members, 1925 and 1926, 2s. 6d.; 1927, 1s.

TEXT-BOOK ON AGRICULTURE.

ELEMENTS OF AGRICULTURE: a Text-book prepared under the authority of the Royal Agricultural Society of England by the late W. FREEM, LL.D. Tenth (Revised and Enlarged) Edition (85th Thousand), edited by J. R. AINSWORTH-DAVIS, M.A. 700 pp. with 333 illustrations. 1918. Price 7s. 6d. nett, bound in cloth.

FARM ACCOUNT BOOKS.

No. 1, A DIARY, combining Cash Account with daily record of Farm Transactions. Price 7s. 6d.
No. 2, A FARM ACCOUNT BOOK, 2nd Edition, showing payments and receipts, and supplying a form of Annual Balance Sheet. Price 8s. 6d.

Published for the Society and sold by Messrs. FORSTER, GROOM & Co., Ltd., 15 Charing Cross, London, S.W.1.

No. 3, FARM CASH BOOK, receipts and payments, to be used with a Ledger. Price 10s. 6d.
No. 4, FARM LEDGER, giving specimen entries and particulars of profit and loss account and balance sheet. Price 8s. 6d.

Nos. 3 and 4 are to be obtained at the Society's House, 16 Bedford Square, London, W.C.1.

PAMPHLETS.

VETERINARY PAMPHLETS BY PROFESSOR SIR GEORGE BROWN, C.B.:

DENTITION AS INDICATIVE OF THE AGE OF FARM ANIMALS. Eighth Edition (1927). 64 pp. With 60 illustrations. Price 2s.

ANIMALS OF THE FARM IN HEALTH AND DISEASE. Fifth and Enlarged Edition, revised by Professor G. H. WOOLDRIDGE, F.R.C.V.S., M.R.I.A. (1927). 88 pp. With 64 illustrations. Price 2s.

THE STRUCTURE OF THE HORSE'S FOOT AND THE PRINCIPLES OF SHOEOING. 26 pp. Fifth and Enlarged Edition, revised by J. MACQUEEN, F.R.C.V.S. (1922). With 12 illustrations. Price 1s.

CONTAGIOUS FOOT ROT OF SHEEP. Second and Enlarged Edition (1905). 24 pp. With 8 illustrations. Price 1s.

OTHER VETERINARY PAMPHLETS:

THE MARE AND FOAL. By Professor J. WORTLEY AXE, M.R.C.V.S. 57 pp. With 20 illustrations. Third Edition (1925). Price 1s.

THE LAMING PEN. By HAROLD LERNEY. 5th Ed. (1929). 40 pp. With 9 illustrations. Price 1s.

TUBERCULOSIS AS REGARDS HEREDITY IN CAUSATION AND ELIMINATION FROM INFECTED HERDS. By Professor SIR JOHN MCFADYEAN, M.B., B.Sc., C.M., M.R.C.V.S. (1911). 19 pp. Price 1s.

CALE REARING: An Experiment conducted at the Woburn Experimental Farm, 1912-14. By J. AUGUSTUS VOELCKER, M.A., B.Sc., Ph.D. (1915). 12 pp. Price 6d., 3d. to Members.

DAIRY PAMPHLETS:

(Issued under the authority of the Dairy Committee of the Society.)

THE PRACTICE OF (a) CHEDDAR, (b) CHESHIRE, & (c) STILTON CHEESE-MAKING. Price 2d. each.

SIMPLE RULES FOR BUTTER-MAKING. (Sheet.) Price 2d. each, or 10s. per 100. Mounted on card and varnished, to hang up in the Dairy, 6d. each.

RECIPES FOR MAKING CREAM AND SOFT CHEESES. Price 2d.

RECIPE FOR MAKING SCALDED CREAM. Price 2d.

RECIPES FOR MAKING HARD AND SOFT CHEESES FROM GOATS' MILK. Price 2d.

MILK ADULTERATION. Price 2d.; 10s. per 100.

OTHER PAMPHLETS:

COMPENSATION FOR THE UNEXHAUSTED MANURIAL VALUES OF FEEDING STUFFS AND FERTILISERS. By J. AUGUSTUS VOELCKER, M.A., B.Sc., Ph.D., and A. D. HALL, M.A., F.R.S. (1914). 16 pp. Price 1s.

PRACTICAL FRUIT FARMING. By R. G. HATTON, M.A., and WALTER IL. ELGAR, F.S.I. 87 pp. With 7 illustrations (1922). Price 2s.

PRACTICAL HINTS ON VEGETABLE FARMING. By JAMES UDALL (1904). With 15 illustrations. 41 pp. Price 1s.

HOP CULTIVATION. By CHARLES WHITEHEAD, F.L.S., F.G.S. With 18 illustrations (1903). 46 pp. Price 1s.

THE WOBURN EXPERIMENTAL STATION OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND. By J. AUGUSTUS VOELCKER, M.A., B.Sc., Ph.D. Annual Reports on Field, Feeding, and Pot-culture Experiments (1899-1921). Price 1s. each.

REPORT ON THE WOBURN POT-CULTURE STATION. By J. AUGUSTUS VOELCKER, M.A., B.Sc., Ph.D. With 17 illustrations (1900). 52 pp. Price 2s. 6d.

THE MAKING OF THE LAND IN ENGLAND. By ALBERT PELL (1899). 27 pp. Price 6d.

THE MANAGEMENT AND PLANTING OF BRITISH WOODLANDS. By Professor CHARLES E. CURTIS, F.S.I. (1904). With 6 illustrations. 86 pp. Price 1s.

THE CONVERSION OF HOME-GROWN TIMBER. By ROBERT ANDERSON, F.S.I. (1904). With 4 illustrations. 28 pp. Price 1s.

ORCHARD AND BUSH-FRUIT PESTS AND HOW TO COMBAT THEM. By ORSEL WARBURTON, M.A., F.Z.S. With 12 illustrations. Second Edition (1910). 20 pp. Price 6d.

SOME PROBLEMS OF RE-AFFORESTATION. By W. SOMERVILLE, M.A., D.Sc. (1919). 13 pp. Price 6d.

COTTAGE SANITATION IN RURAL DISTRICTS. By H. MACLEAN WILSON, M.D., B.Sc. With a Preface by T. FRIDGIN TEALE, F.R.S. Second and Enlarged Edition (1896). 82 pp. 12 illustrations. Price 3d. per copy; 2s. per doz.; 12s. 6d. per 100.

MOLE-DRAINING AND THE RENOVATION OF OLD PIPE DRAINS. By DOUGLAS T. THING, F.S.I. With 9 illustrations (1920). Price 6d.

THE UTILISATION OF WHEAT. 24 pp., with 2 illustrations (1923). Price 1s.

The above can be obtained at the Society's House, 16 Bedford Square, London, W.C.1, through any bookseller, or of Mr. JOHN MURRAY, 55a, Abchurch Lane, W.C.1.

Copies of pamphlets sold at not less than One Shilling each are obtainable by Members of the Society at half-price on direct application to the Secretary.

(This application form, when filled up, should be addressed to the Secretary of the Society,
16 Bedford Square, London, W.C.1.)

Royal Agricultural Society of England.

FORM OF APPLICATION FOR MEMBERSHIP.

I.....
(State whether Mr., Mrs., or Miss.)

of.....

.....

.....

County in which
Residence is situated }.....

am desirous of becoming a {Governor } of the Royal Agricultural
Member }

Society of England, and engage, when elected, to pay the Annual

Subscription of £†.....

and to conform to the Rules and Regulations of the Society until I shall with-
draw from it by notice in writing, to the Secretary.

(Signature).....

Date.....

Nominated by.....

Elected at the Council Meeting held on.....

..... Secretary.

† The Council trust that Governors or Members who are disposed to give a larger annual
Subscription than the minimum prescribed by the Bye-laws will be kind enough to do so,
in order that the Society's operations may be maintained. The minimum Annual Subscription
of a Governor is £8 (Life Composition £50), and of a Member £1 (Life Composition £15).

Ladies are admissible as Governors or Members equally with gentlemen.

Royal Agricultural Society of England,

16 BEDFORD SQUARE, LONDON, W.C.1.

PRIVILEGES OF GOVERNORS AND MEMBERS.

FREE ADMISSION TO SHOWYARD.

The Society holds every year an Exhibition of Live Stock, Farm Produce, and Implements, to which and to the unreserved portions of the Grand Stands at the Horse Ring (H room), Dairy, and elsewhere, Members are entitled to free admission.

REDUCED RATES FOR ENTRIES AT THE ANNUAL SHOW.

Entries of Horses, Cattle, Sheep, Pigs, Poultry, Produce, &c., can be made by Members at reduced rates. For Implement exhibits the entry fee of £2 payable in addition to the charges for space is not charged when a partner of the firm is a Member of the Society. Firms and Companies may secure these privileges by the Membership of one or more of their partners.

REDUCED RAILWAY FARES TO THE SHOW.

The Railway Companies issue to Governors and Members of the Society attending the Show a Railway Ticket for the double journey at the price of a single fare and a third. (Minimum fare 5s.)

SOCIETY'S JOURNAL AND OTHER PUBLICATIONS.

Every Member is entitled to receive, without charge, a copy of the Journal of the Society, each Volume of which contains articles and communications by leading authorities on the most important agricultural questions of the day, together with official reports by the Society's Scientific Advisers and on the various departments of the Show, and other interesting features. Copies of the Society's pamphlets, sold at not less than One Shilling each, are obtainable by Members at half-price on direct application to the Secretary.

LIBRARY AND READING ROOM.

The Society has a large and well-stocked Library of standard books on agricultural subjects, which have been catalogued and can now be borrowed by Members. A Reading Room is provided at which the principal agricultural newspapers and other periodicals can be consulted by Members during office hours (10 a.m. to 4 p.m.; Saturdays, 10 a.m. to 1 p.m.).

CHEMICAL PRIVILEGES.

The Society makes annually a considerable grant from its general funds in order that Members may obtain at low rates analyses of feeding stuffs, fertilisers, soils, &c., by the Society's Consulting Chemist (Dr. J. AUGUSTUS VOELCKER, C.I.E., Analytical Laboratory, 1 Tudor Street, London, E.C.4). Members may consult Dr. VOELCKER personally or by letter at a small fee.

VETERINARY PRIVILEGES.

Members can consult the Professors of the Royal Veterinary College, Camden Town, London, N.W.1, at fixed rates of charge, and they have the privilege of sending Cattle, Sheep and Pigs to the College Infirmary on the same terms as subscribers to the College.

BOTANICAL PRIVILEGES.

Reports can be obtained by Members from the Society's Botanist, Professor Sir R. H. DUFFEN, F.R.S., School of Agriculture, Cambridge, on the purity and germinating power of seeds, and on diseases or weeds affecting farm crops, at a fee of one shilling in each case.

ZOOLOGICAL PRIVILEGES.

Information respecting any animal (quadruped, bird, insect, worm, &c.) which, in any stage of its life, affects the farm or rural economy generally, with suggestions as to methods of prevention and remedy in respect to any such animal that may be injurious, can be obtained by Members from the Society's Zoologist, Mr. ORCH WARBURTON, M.A., School of Agriculture, Cambridge, at a fee of one shilling in each case.

GENERAL MEETINGS OF MEMBERS.

The Annual General Meeting of Governors and Members is held in London in the month of December, during the week of the Smithfield Club Cattle Show. A Meeting is also held in the Society's Showyard in the summer.

ANNUAL SUBSCRIPTION OF MEMBERS.

The Annual Subscription of a Member is payable in advance on the 1st January of each year. Every candidate for admission into the Society must be proposed in writing by an existing Member. Forms of proposal may be obtained on application to the Secretary, at 16 Bedford Square, London, W.C.1.

SPECIAL PRIVILEGES OF GOVERNORS.

In addition to the privileges of Members, as described above, Governors are entitled to an extra copy of each Volume of the Journal, to attend and speak at all meetings of the Council, and are alone eligible for election as President, Trustee, and Vice-President. A Governor also receives a Silver-Gilt Badge admitting him to the Show, and to the Council and Governors' Rooms. The minimum Annual Subscription of a Governor is £5, with a Life Composition of £50.

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WATERLOO 97% PURE COTTON CAKES

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Guaranteed 97 per cent. of Purity.



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SAME QUALITY AND GUARANTEE AS THE

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ANGLO SHAPE.

Guaranteed 97 per cent. of Purity and to contain 12 per
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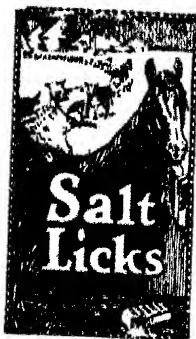
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viz.:—"Guaranteed pure and to be delivered in good condition."

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For Price and Particulars, apply to AYRE BROS., THE AVENUE, HULL.
(Selling Brothers for the Company.)

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ALL THE VIRTUES
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THE ADDITION OF

LIME PHOSPHATES

IRON and IODINE

PURE SALT LICKS
ALSO SUPPLIED

ONE FREE HOLDER
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DOZEN LICKS.

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MANUFACTURED FROM
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BRINE AND FREE FROM
GYPSUM AND
MAGNESIUM CHLORIDE.

EVEN GRAIN.
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(2 per cent in 5 seconds)

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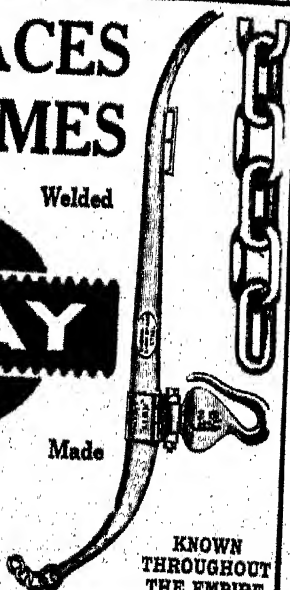


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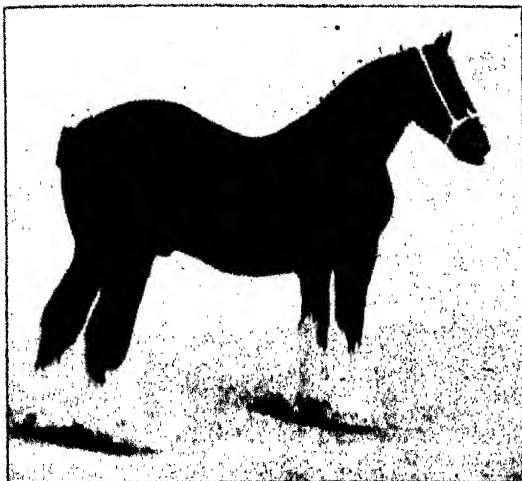
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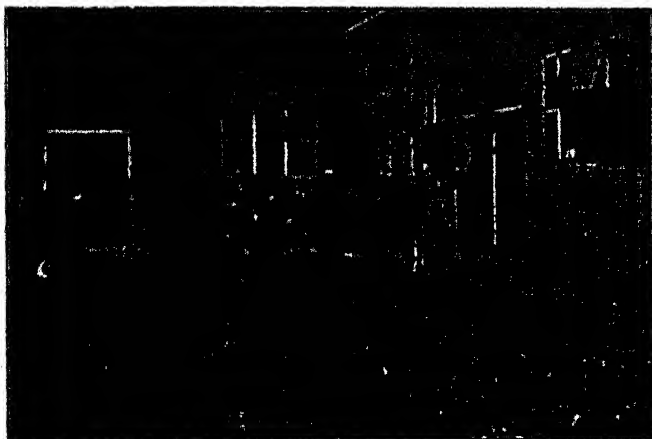
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SHEEP—continued.

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